

- Blockade of K<sub>ATP</sub> Channels With Glibenclamide Does Not Abolish Preconditioning During Demand Ischemia** ..... 75  
Steven D. Correa and Saul Schaefer

- T-Wave Alterations at the Onset of Wall Motion Abnormalities During Dobutamine Echocardiographic Stress Test** ..... 78  
Fabio Fantini, Giuseppe Barletta, and Riccarda Del Bene

- Usefulness of Coronary Stenting for Cardiogenic Shock** ..... 81  
John G. Webb, Ronald G. Carere, J. David Hilton, Alan Rabinowitz, Elizabeth Buller, Arthur A. Dodek, and James Abel

- Effect of Fluvastatin on Lipids and Fibrinolysis in Coronary Artery Disease** ..... 84  
Maurizio Bevilacqua, Paolo Bettica, Massimo Milani, Tarcisio Vago, Angela Rogolino, Velella Righini, Edoardo Santoli, and Guido Norbiato

- Estrogen Replacement Therapy and Exercise Performance in Postmenopausal Women With Coronary Artery Disease** ..... 87  
Efthia Sbarouni, Zenon S. Kyriakides, Nikolaos Nikolaou, and Dimitrios Th. Kremastinos

- Impact of Plaque Burden on Compensatory Enlargement of Coronary Arteries in Cardiac Allograft Vasculopathy** ... 89  
Klaus Pethig, Bernd Heublein, and Thorsten Wahlers, for the Working Group on Cardiac Allograft Vasculopathy

- Effectiveness of Sotalol for Atrial Flutter in Children After Surgery for Congenital Heart Disease** ..... 92  
Gertie C.M. Beaufort-Krol and Margreet Th. E. Bink-Boelkens

- Intravenous Clofilium for Conversion of Atrial Fibrillation** ..... 94  
Steven Borzak, Nouri Al-Khaled, Lori Douthat, Mitchell Steinberg, and A. David Goldberg

- Relation Between Amiodarone and Desethylamiodarone Plasma Concentrations and Ventricular Defibrillation Energy Requirements** ..... 97  
Emile G. Daoud, K. Ching Man, Laura Horwood, Fred Morady, and S. Adam Strickberger

- Paradoxical Failure of QT Prolongation During Cardioinhibitory Neurocardiogenic Syncope** ..... 100  
Fredrick J. Jaeger Jr., Sergio L. Pinski, Richard G. Trohman, and Fetnat M. Fouad-Tarazi

- Usefulness of Echocardiography in Detecting Left Ventricular Dysfunction in Population-Based Studies (The Rotterdam Study)** ..... 103  
Arend Mosterd, Martine C. de Bruijne, Arno W. Hoes, Jaap W. Deckers, Albert Hofman, and Diederick E. Grobbee

- Acute Reversibility of Pulmonary Hypertension Predicts Neither Long-Term Hemodynamic Response Nor Outcome in Patients Awaiting Heart Transplantation** ..... 105  
T. Barry Levine, Arlene B. Levine, A. David Goldberg, Michael C. Tobes, Barbara Narins, Sidney Goldstein, and Michael Lesch

- Effects of Hemodialysis on Left Ventricular Diastolic Filling** ..... 106  
Simon Chakko, Ihab Girgis, Gabriel Contreras, Guido Perez, Kenneth M. Kessler, and Robert J. Myerburg

- Categorization of Abnormal Left Ventricular Function: Comparison Between Radionuclide Angiographic and Echocardiographic Technique in Postinfarction Patients** ..... 108  
Arie Breekland, Paul K. Blanksma, Roland A.M. Kengen Els G. Pieper, Harry J.G.M. Crijns, and Cees A. Visser

## CASE REPORT

- Cervical Aortic Arch with Aneurysm Formation** ..... 112  
Gail D. Pearson, Jean S. Kan, Catherine A. Neill, Frank M. Midgley, Timothy J. Gardner, and Thomas J. Hougen

## JANUARY 15, 1997, VOL. 79, NO. 2

## CORONARY ARTERY DISEASE

- Interaction Between Enalapril and Aspirin on Mortality After Acute Myocardial Infarction: Subgroup Analysis of the Cooperative New Scandinavian Enalapril Survival Study II (CONSENSUS II)** ..... 115  
Khang Ngoc Nguyen, Ivar Aursnes, and John Kjekshus

- Serum Iron Level, Coronary Artery Disease, and All-Cause Mortality in Older Men and Women** ..... 120  
Maria-Chiara Corti, Jack M. Guralnik, Marcel E. Salive, Luigi Ferrucci, Marco Pahor, Robert B. Wallace, and Charles H. Hennekens

- Relation of Coronary Calcium Score by Electron Beam Computed Tomography to Arteriographic Findings in Asymptomatic and Symptomatic Adults** ..... 128  
Alan D. Guerci, Louise A. Spadaro, Jeffrey J. Popma, Kenneth J. Goodman, Bruce H. Brundage, Matthew Budoff, Gail Lerner, and Robert F. Vizza

- Prevalence of Unrecognized Silent Myocardial Ischemia and Its Association With Atherosclerotic Risk Factors in Noninsulin-Dependent Diabetes Mellitus** ..... 134  
Milan Study on Atherosclerosis and Diabetes (MiSAD) Group

- Euphenic Prevention of Coronary Artery Disease** ..... 140  
Andrew E. Czeizel, Akos Kalina, and Roger R. Williams

## ARRHYTHMIAS AND CONDUCTION DISTURBANCES

- Frequency of Disabling Symptoms in Supraventricular Tachycardia** ..... 145

Kathryn A. Wood, Barbara J. Drew, and Melvin M. Scheinman

Danzi, Luigi Niccoli, Luigi Campolo, and Giuseppe Specchia

# **Clinical Predictors of Transvenous Defibrillation Energy Requirements** ..... 150

Korosh Khalighi, Barry Daly, E. Victor Leino, Stephen R. Shorofsky, Neal G. Kavesh, Robert W. Peters, and Michael R. Gold

# **The Signal-Averaged Electrocardiogram Is of Limited Value in Patients With Bundle Branch Block and Dilated Cardiomyopathy in Predicting Inducible Ventricular Tachycardia or Death** ..... 154

Béatrice Brembilla-Perrot, Arnaud Terrier de la Chaise, Laurent Jacquemin, Daniel Beurrier, and Philippe Houplon

# **Reproducibility of Time-Domain Indexes of Heart Rate Variability in Patients With Vasovagal Syncope** ..... 160

George E. Kochiadakis, Alexandros E. Orfanakis, Amalia T. Rombola, Stavros I. Chrysostomakis, Gregory I. Chlouverakis, and Panos E. Vardas

## **VALVULAR HEART DISEASE**

# **Comparison of Age, Gender, Number of Aortic Valve Cusps, Concomitant Coronary Artery Bypass Grafting, and Magnitude of Left Ventricular-Systemic Arterial Peak Systolic Gradient in Adults Having Aortic Valve Replacement for Isolated Aortic Valve Stenosis** ..... 166

Phillip J. Stephan, A. Carl Henry III, Robert F. Hebel, Jr., Lonnie Whiddon, and William C. Roberts

## **CONGENITAL HEART DISEASE**

# **Gestational Age- and Growth-Related Alterations in Fetal Right and Left Ventricular Diastolic Filling Patterns** ..... 173

Kenji Harada, Mary J. Rice, Takahiro Shiota, Masahiro Ishii, Robert W. McDonald, Mark D. Reller, and David J. Sahn

## **MISCELLANEOUS**

# **Gender Specific Differences in the QT Interval and the Effect of Autonomic Tone and Menstrual Cycle in Healthy Adults** ..... 178

John H. Burke, Frederick A. Ehler, Jane T. Kruse, Michele A. Parker, Jeffrey J. Goldberger, and Alan H. Kadish

## **BRIEF REPORTS**

# **Usefulness of the Admission Electrocardiogram for Identifying the Infarct-Related Artery in Inferior Wall Acute Myocardial Infarction** ..... 182

Michael C. Kontos, Pratik V. Desai, Robert L. Jesse, and Joseph P. Ornato

# **Therapeutic Strategy With Total Coronary Artery Occlusions** ..... 185

Etienne Delacretaz and Bernhard Meier

# **Absence of Correlation Between Coronary Thrombosis and Postatherectomy Restenosis** ..... 188

Eloisa Arbustini, Mauro Boscarini, Barbara Dal Bello, Stefano De Servi, Emanuele Porcu, Catherine Klersy, Patrizia Morbini, Andrea Pilotto, Luigi Angoli, Sergio Repetto, Gianbattista

# **Effects of Palmaz-Schatz Stents on Angled Coronary Arteries** ..... 191

Paul S. Phillips, Fernando Alfonso, Javier Segovia, Javier Goicolea, Rosana Hernandez, Camino Banuelos, Antonio Fernandez-Ortiz, Maria Jose Perez-Vizcayno, and Carlos Macaya

# **Reflection of Epicardial U-Wave Changes in Surface Inferior Electrocardiograms During Inferoposterior or Anterior Wall Myocardial Ischemia** ..... 194

Hajime Kataoka, Shoji Yano, Akira Tamura, and Yoshiaki Mikuriya

# **Angioscopic Coronary Macromorphology After Thrombolysis in Acute Myocardial Infarction** ..... 197

Koh Arakawa, Kyoichi Mizuno, Toshio Shibuya, Hirokuni Etsuda, Hirotsugu Tabata, Hirokazu Nagayoshi, Kimio Satomura, Kazushige Isojima, Akira Kurita, and Haruo Nakamura

# **Preservation of Autonomic Function Following Successful Reperfusion With Streptokinase Within 12 Hours of the Onset of Acute Myocardial Infarction** ..... 203

Paul A. Kelly, James Nolan, J. Ian Wilson, and E. John Perrins

# **Clinical Predictors of Defibrillation Energy Requirements** ..... 205

Jörg Neuzner, Hassan Bahawar, Alexander Berkowitsch, Ulrich Michel, Martin Schlepper, and Heinz F. Pitschner

# **Utility and Cost of Event Recorders in the Diagnosis of Palpitations, Presyncope, and Syncope** ..... 207

Richard I. Fogel, Joseph J. Evans, and Eric N. Prystowsky

# **Comparison of Right Ventricular Outflow Tract and Apical Lead Permanent Pacing on Cardiac Output** ..... 209

Michael C. Giudici, Greta A. Thornburg, DiAnne L. Buck, Edmund P. Coyne, Mary C. Walton, Deborah L. Paul, and Jannis Sutton

# **Electrocardiographic Features of Septal Location of Right Ventricular Outflow Tract Tachycardia** ..... 213

Thomas P. Gumbrielle, John P. Bourke, J. Colin Doig, Amgad Kamel, Andreas Lozaia, Quan Fang, Ronald W.F. Campbell, and Stephen S. Furniss

# **Course and Prognosis in Patients $\geq 70$ Years of Age With Congestive Heart Failure and Normal Versus Abnormal Left Ventricular Ejection Fraction** ..... 216

Ratnakar Pernenkil, Janice M. Vinson, Atul S. Shah, Valerie Beckham, Carol Wittenberg, and Michael W. Rich

# **Contribution of Left Atrial Pressure and Dimension to Signal-Averaged P-Wave Duration in Patients With Chronic Congestive Heart Failure** ..... 219

Pompilio Faggiano, Antonio D'Aloia, Emanuela Zanelli, Anna Gualeni, Paola Musatti, and Amerigo Giordano

<b>Assessment of Flail Mitral Leaflets by Dynamic Three-Dimensional Echocardiographic Imaging</b> .....	223
Takeshi Hozumi, Junichi Yoshikawa, Kiyoshi Yoshida, Takashi Akasaka, Tsutomu Takagi, and Atsushi Yamamuro	

<b>Is Mitral Valve Prolapse a Congenital or Acquired Disease?</b> .....	226
Rufino Nascimento, Antônio Freitas, Filomena Teixeira, Décio Pereira, Almada Cardoso, Martin Dinis, and Isabel Mendonça	

<b>Transcatheter Fenestration Dilatation and/or Creation in Postoperative Fontan Patients</b> .....	228
Jacqueline Kreutzer, James E. Lock, Richard A. Jonas, and John F. Keane	

<b>Optimal Albunex Dosing for Enhancement of Doppler Tricuspid Regurgitation Spectra</b> .....	232
W. Evans Kemp, Jr., David M. Kerins, Yu Shyr, and Benjamin F. Byrd III	

<b>Measurement of Coronary Blood Flow Velocity During Handgrip Exercise Using Breath-Hold Velocity Encoded Cine Magnetic Resonance Imaging</b> .....	234
Sebastian Globits, Hajime Sakuma, Ann Shimakawa, Thomas K.F. Foo, and Charles B. Higgins	

<b>Usefulness of Myocardial Velocity Gradient Derived from Two-Dimensional Tissue Doppler Imaging as an Indicator of Regional Myocardial Contraction Independent of Translational Motion Assessed in Atrial Septal Defect</b> ..	237
Masaaki Uematsu, Satoshi Nakatani, Masakazu Yamagishi, Hisao Matsuda, and Kunio Miyatake	

## CASE REPORTS

<b>Abnormal Ventricular Repolarization Mimicking Myocardial Infarction After Heterocyclic Antidepressant Overdose</b> .....	242
Roberto Bolognesi, Dimitri Tsalas, Paolo Vasini, Massimo Conti, and Carlo Manca	

<b>A Genetic Assessment of Trisomy 21 in a Patient With Persistent Truncus Arteriosus Who Died 38 Years Ago</b> .....	245
Paola Francalanci, Pietro Gallo, Bruno Dallapiccola, Giuseppe Calabrese, and Bruno Marino	

## FROM THE EDITOR

<b>Good Books on Cardiovascular Disease Appearing in 1996</b> .....	248
---	-----

## FEBRUARY 1, 1997, VOL. 79, NO. 3

### CORONARY ARTERY DISEASE

<b>Circadian Variation in the Onset of Unstable Angina and Non-Q-Wave Acute Myocardial Infarction (The TIMI III Registry and TIMI IIIB)</b> .....	253
Christopher P. Cannon, Carolyn H. McCabe, Peter H. Stone, Mark Schactman, Bruce Thompson, Pierre Theroux, Robert S. Gibson, Ted Feldman,	

Neal S. Kleiman, Geoffrey H. Tofler, James E. Muller, Bernard R. Chaitman, and Eugene Braunwald, for the TIMI III Registry and TIMI IIIB Investigators

<b>Comparison of Heparin Therapy for <math>\leq 48</math> Hours to <math>&gt;48</math> Hours in Unstable Angina Pectoris</b> .....	259
Lloyd W. Klein, Faisal Wahid, Betsy J. Vandenberg, Joseph E. Parrillo, and James E. Calvin	

<b>Primary Angioplasty Versus Thrombolysis in the Treatment of Acute Myocardial Infarction</b> .....	264
Ralf Zahn, Armin Koch, Jörg Rustige, Rudolf Schiele, Alexander Wirtzfeld, Karl-Ludwig Neuhaus, Horst Kuhn, Hartmut Gülker, and Jochen Senges, for the ALKK Study Group	

<b>Predicting Adverse Outcome With Exercise SPECT Technetium-99m Sestamibi Imaging in Patients With Suspected or Known Coronary Artery Disease</b> .....	270
Tim S. Boyne, Bruce A. Koplan, William J. Parsons, William H. Smith, Denny D. Watson, and George A. Beller	

<b>The Impact of Optimal Stenting Techniques on Cardiac Catheterization Laboratory Resource Utilization and Costs</b> .....	275
Craig A. Sukin, Donald S. Baim, Ronald P. Caputo, Kalon K.L. Ho, Roger J. Laham, Margaret G. Flatley, Joseph P. Carrozza Jr., and David J. Cohen	

<b>Compliance and Efficacy of Cardiac Rehabilitation and Risk Factor Modification in the Medically Indigent</b> .....	281
Daniel B. Friedman, Ann N. Williams, and Benjamin D. Levine	

<b>Standard Versus Low-Dose Weight-Adjusted Heparin in Patients Treated With the Platelet Glycoprotein IIb/IIIa Receptor Antibody Fragment Abciximab (c7E3 Fab) During Percutaneous Coronary Revascularization</b> .....	286
A. Michael Lincoff, James E. Tcheng, Robert M. Califf, Theodore Bass, Jeffrey J. Popma, Paul S. Teirstein, Neal S. Kleiman, Larry J. Hattel, H. Vernon Anderson, James J. Ferguson, Catherine F. Cabel, Keaven M. Anderson, Lisa G. Berdan, Maura H. Musco, Harlan F. Weisman, and Eric J. Topol, for the PROLOG Investigators	

<b>Echocardiographic Prediction of Complications in Patients With Chest Pain</b> .....	292
Kirsten E. Fleischmann, Thomas H. Lee, Patricia C. Come, Lee Goldman, E. Francis Cook, Eduardo Caguioia, Paula A. Johnson, Maureen P. Albano, and Richard T. Lee	

<b>Morbidity and Use of Medical Resources in Patients With Chest Pain and Normal or Near-Normal Coronary Arteries</b> .....	299
Per Albertsson, Håkan Emanuelsson, Thomas Karlsson, Carl Lamm, Wanja Sandén, Gunilla Lagerberg, and Johan Herlitz	

<b>Comparison of Patients With Either <math>&lt;70\%</math> Diameter Narrowing or <math>\geq 70\%</math> Narrowing of the Right Coronary Artery When Performing Rotational Atherectomy on <math>\geq 1</math> Narrowing in the Left Coronary Arteries</b> .....	305
Mark Reisman, Maurice Buchbinder, David Warth, Nancy Sundling, Verna Harms, and Patrick I. Whitlow	

## ARRHYTHMIAS AND CONDUCTION DISTURBANCES

- Predictors for Successful Ablation of Right- and Left-Sided Idiopathic Ventricular Tachycardia** ..... 309  
Michael J. Reiter, Labros A. Karagounis, David E. Mann, Carl Timmermans, and Hein J.J. Wellens

- Reproducibility of Drug Efficacy Predictions by Holter Monitoring in the Electrophysiologic Study Versus Electrocardiographic Monitoring (ESVEM) Trial** ..... 315  
Michael J. Reiter, Labros A. Karagounis, David E. Mann, James A. Reiffel, Elizabeth Hahn, Vernon Hartz, and the ESVEM Investigators

- Right and Left Ventricular Hemodynamic Performance During Sustained Ventricular Tachycardia** ..... 323  
Theofilos M. Kolettis, Sanjeev Saxena, Philip Mathew, Ryszard B. Krol, Irakli Giorgberidze, and Ghanshyam Bhambhani

## CONGESTIVE HEART FAILURE

- Enalapril Reduces QTc Dispersion in Mild Congestive Heart Failure Secondary to Coronary Artery Disease** ... 328  
Craig S. Barr, Abdelwahab A. Naas, Michael Fenwick, and Allan D. Struthers

## VALVULAR HEART DISEASE

- Prediction of Surgical Strategy in Mitral Valve Regurgitation Based on Echocardiography** ..... 334  
Irene M. Hellemans, Els G. Pieper, Anita C.J. Ravelli, Johannes P.M. Hamer, Wybren Jaarsma, Emile Cheriex, Cathinka H. Peels, Patricia F.A. Bakker, Jan G.P. Tijssen, and Cees A. Visser, on Behalf of The ESMIR Research Group of the Interuniversity Cardiology Institute of The Netherlands

- Effect of Warfarin on Regional Left Atrial Coagulation Activity in Mitral Stenosis** ..... 339  
Roger E. Peverill, Geoffrey Harris, John Gelman, T. Eng Gan, Richard W. Harper, and Joseph J. Smolich

## CONGENITAL HEART DISEASE

- Natural Course of Isolated Pulmonary Valve Stenosis in Infants and Children Utilizing Doppler Echocardiography** ..... 344  
Daniel G. Rowland, William W. Hammill, Hugh D. Allen, and Howard P. Gutesell

## MISCELLANEOUS

- Effect of a Single High-Fat Meal on Endothelial Function in Healthy Subjects** ..... 350  
Robert A. Vogel, Mary C. Corretti, and Gary D. Plotnick

- Comparison of Left Ventricular Function Using Isometric Exercise Doppler Echocardiography in Competitive Runners and Weightlifters Versus Sedentary Individuals** ..... 355  
Enrique Z. Fisman, Pedro Embon, Amos Pines, Alexander Tenenbaum, Yaacov Drory, Itzhak Shapira, and Michael Motro

## BRIEF REPORTS

- Identification of the Anaerobic Threshold Using Double Product in Patients With Coronary Artery Disease** ..... 360  
Peter H. Brubaker, Akira Kiyonaga, Brett A. Matrazzo, William E. Pollock, Munehiro Shindo, Henry S. Miller Jr., and Hiroaki Tanaka

- Frequency of Pericardial Friction Rub ("Pericarditis") After Direct Percutaneous Transluminal Coronary Angioplasty in Q-Wave Acute Myocardial Infarction** ..... 362  
Tetsuro Sugiura, Kazuya Takehana, Yoshiteru Abe, Hiroshi Kamihata, Masahiro Karakawa, Kengo Hatada, and Toshiji Iwasaka

- Early Chronotropic Incompetence Predicts the Need for Atropine During Dobutamine Stress Echocardiography** ..... 365  
Anne M. Hepner, David S. Bach, and William F. Armstrong

- Left Atrial Function and Atrial Natriuretic Factor/Cyclic Guanosine Monophosphate Changes in DDD and VVI Pacing Modes** ..... 366  
George N. Theodorakis, Fotis Panou, Manolis Markianos, Nikolaos Fragakis, Efthimios G. Livanis, and Dimitrios Th. Kremastinos

- Utility of Patient-Activated Cardiac Event Recorders in General Clinical Practice** ..... 371  
Peter Zimetbaum, Kelly Y. Kim, Kalon K. L. Ho, Joseph Zebede, Mark E. Josephson, and Ary L. Goldberger

- Evolution of Left Ventricular Hypertrophy and Function During Long-Term Treatment of Systemic Hypertension With Enalapril** ..... 373  
José Ramón González-Juanatey, Antonio Pose Reino, Alfonso Varela Román, José María García Acuña, Jesús Alberto Fernández López, and José Cabezas Cerrato

- Detection of Right to Left Shunts in Decompression Sickness in Divers** ..... 377  
Edmund K. Kerut, Walter D. Truax, Thor E. Borreson, Keith W. Van Meter, Michael B. Given, and Thomas D. Giles

- Prevalence of Echocardiographic Findings in 554 Men and in 1,243 Women Aged >60 Years in a Long-Term Health Care Facility** ..... 379  
Wilbert S. Aronow, Chul Ahn, and Itzhak Kronzon

- Dobutamine Stress Echocardiography in the Assessment of Suspected Myocardial Ischemia in Children and Young Adults** ..... 380  
Thomas R. Kimball, Sandra A. Witt, and Stephen R. Daniels

- Impact of Curve Distortion Errors on Intravascular Ultrasound Measurements and Three-Dimensional Reconstructions** ..... 384  
Severin P. Schwarzacher, Yasuhiro Honda, Jonas A. Metz, Chris A. Asvar, Peter J. Fitzgerald, and Paul G. Yock



## CASE REPORT

- Deletions in Chromosome 22q11 Region in Cervical Aortic Arch** ..... 388  
Anil Kumar, Jerome L. McCombs, and David W. Sapiro

**FEBRUARY 15, 1997, VOL. 79, NO. 4**

## CORONARY ARTERY DISEASE

- Hemorrhagic Events During Therapy With Recombinant Tissue Plasminogen Activator, Heparin, and Aspirin for Unstable Angina (Thrombolysis in Myocardial Ischemia, Phase IIIB Trial)** ..... 391  
Edwin G. Bovill, Russell P. Tracy, Genell L. Knatterud, Peter H. Stone, Jim Nasmi, Joel M. Gore, Bruce W. Thompson, Geoffrey H. Tofler, Neal S. Kleiman, Christopher Cannon, and Eugene Braunwald

- Effects of Cardiac Rehabilitation, Exercise Training, and Weight Reduction on Exercise Capacity, Coronary Risk Factors, Behavioral Characteristics, and Quality of Life in Obese Coronary Patients** ..... 397  
Carl J. Lavie and Richard V. Milani

- Impact of Local Atherosclerotic Remodeling on the Calculation of Percent Luminal Narrowing** ..... 402  
Gerard Pasterkamp, Peter J.W. Wensing, Berend Hillen, Mark J. Post, Willem P.T.M. Mali, and Cornelius Borst

- Prognosis in Patients With Left Ventricular Apical Aneurysm Diagnosed by Thallium-201 or Tc-99m Sestamibi SPECT Images** ..... 406  
Elizabeth G. Krawczynska, Naomi P. Alazraki, Rizwan Karatela, Margie E. Jones, C. David Cooke, Ernest V. Garcia, and William S. Weintraub

- Correlation Between Time-Domain Measures of Heart Rate Variability and Scatterplots in Patients With Healed Myocardial Infarcts and the Influence of Metoprolol** ..... 412  
Ellen C. Keeley, Richard A. Lange, L. David Hillis, José A. Joglar, and Richard L. Page

- Cardiac Risk Stratification in Renal Transplantation Using a Form of Artificial Intelligence** ..... 415  
Thomas F. Heston, Douglas J. Norman, John M. Barry, William M. Bennett, and Richard A. Wilson

## ARRHYTHMIAS AND CONDUCTION DISTURBANCES

- Propafenone for Conversion and Prophylaxis of Atrial Fibrillation** ..... 418  
Roland Stroobandt, Brigitte Stieles, and Rafaël Hoebrechts, on Behalf of the Propafenone Atrial Fibrillation Trial Investigators

- Similar Time-Dependent Recovery Property of Fast and Slow Atrioventricular Nodal Pathways** ..... 424  
Ming-Lon Young, Chi-Tai Kuo, Vikas Kohli, and Grace S. Wolff

## SYSTEMIC HYPERTENSION

- Combined Enalapril and Felodipine Extended Release (ER) for Systemic Hypertension** ..... 431  
Alan H. Gradman, Neal R. Cutler, Pamela J. Davis, John A. Robbins, Robert J. Weiss, and Barry C. Wood, for the Enalapril-Felodipine ER Factorial Study Group

## VALVULAR HEART DISEASE

- Comparison of Multiplane and Biplane Transesophageal Echocardiography in the Assessment of Aortic Stenosis** ..... 436  
Kee-Sik Kim, Will Maxted, Navin C. Nanda, Kenneth Coggins, Debasish Roychoudhry, Miguel Espinal, Po-Hoey Fan, Asucion Camino, Rajat Sanyal, Ana Finch, James Kirklin, and Albert Pacifico

## CONGENITAL HEART DISEASE

- Doppler Echocardiographic Evaluation of Ventricular Diastolic Filling in Fetuses With Ductal Constriction** ..... 442  
Kenji Harada, Mary J. Rice, Robert W. McDonald, Takahiro Shiota, Masahiro Ishii, Mark D. Reller, and David J. Sahn

## MISCELLANEOUS

- Comparison of Quantitative Echocardiography With Endomyocardial Biopsy to Define Myocardial Rejection in Pediatric Patients After Cardiac Transplantation** ..... 447  
Stephen Neuberger, Robert N. Vincent, Nancy Doelling, Kevin Sullivan, Sheron Honeycutt, Kirk R. Kantor, and Derek Fyfe

- Long-Term Cardiopulmonary Exercise Performance After Heart Transplantation** ..... 451  
Naohiko Osada, Bernard R. Chaitman, Thomas J. Donohue, Thomas L. Wolford, Arthur M. Stelken, and Leslie W. Miller

## INTERVIEW

- James Thornton Willerson, MD: A Conversation With the Editor** ..... 457  
William C. Roberts

## EDITORIAL

- Mortality Trials With Implantable Defibrillators** ..... 468  
Seah Nisam and Günter Breithardt

## BRIEF REPORTS

- Results of Elective Stenting of Branch-Ostial Lesions** ..... 472  
Atul Mathur, Ming W. Liu, Christopher M. Goods, Khaled F. Al-Shaibi, Michael J. Parks, Sriram S. Iyer, Suresh P. Jain, Jay S. Yadav, William A. Baxley, and Larry S. Dean

- Effect of Theophylline on Adaptation of the Heart to Myocardial Ischemia During Percutaneous Transluminal Coronary Angioplasty in Patients With Stable Angina Pectoris** ..... 475  
Kazuhiko Hashimura, Yoshiyuki Kijima, Yasuhiko Matsura, Tetsuya Ueda, Yoji Kato, Isao Mori, Tetsuo Minamino, Masafumi Kitakaze, and Masatsugu Hori

**Comparison of Exercise Electrocardiography and Dobutamine Echocardiography With Invasively Assessed Myocardial Fractional Flow Reserve in Evaluation of Severity of Coronary Arterial Narrowing** ..... 478

Jozef Bartunek, Eddy Van Schuerbeeck, and Bernard de Bruyne

**Decreased Post-Myocardial Infarction Heart Rate Variability and Cardiac Denervation Assessed by Metaiodobenzylguanidine Scintigraphy** ..... 482

Efthimios G. Livanis, Panagiota G. Flevari, George N. Theodorakis, Nikolaos G. Vassilopoulos, and Dimitrios Th. Kremastinos

**Effects of Acute Alcohol Ingestion on Heart Rate Variability in Patients With Documented Coronary Artery Disease and Stable Angina Pectoris** ..... 487

Juhani Rossinen, Matti Viitasalo, Juhani Partanen, Pekka Koskinen, Markku Kupari, and Markku S. Nieminen

**Comparison of Cocaine-Induced Vasoconstriction of Left and Right Coronary Arterial Systems** ..... 492

Wanpen Vongpatanasin, Richard A. Lange, and L. David Hillis

**Pretreatment With Aspirin and Ticlopidine Confers Lower Thrombogenic Potential of Radiofrequency Catheter Ablation** ..... 494

Antonis S. Manolis, Vassilis Vassilikos, Themis N. Maounis, Iefteris Psarros, Helen Melita-Manolis, Despina Papatheou, Alex Haliassos, Vassiliki Christopoulou-Cokkinou, and Dennis V. Cokkinos

**Influence of Additional Partition on the Recovery of Atrial Function After Atrial Compartment Operation for Atrial Fibrillation** ..... 497

Jer-Min Lin, Fang-Yue Lin, Jiunn-Lee Lin, Kou-Gi Shyu, Juey-Jen Hwang, and Yung-Zu Tseng

**Efficacy of Intravenous Propafenone in Termination of Atrial Flutter by Overdrive Transesophageal Pacing Previously Ineffective** ..... 500

Daniele D'Este, Emanuele Bertaglia, Roberto Mantovan, Albino Zanocco, Maurizio Franceschi, and Pietro Pascotto

**Chronic Rise in Monophasic Defibrillation Thresholds With a Transvenous Lead System** ..... 502

Malcolm M. Kirk, Stephen R. Shorofsky, Koroush Khalighi, Neal G. Kavesh, Robert W. Peters, and Michael R. Gold

**Comparison of Ambulatory Blood Pressure and Amounts of Left Ventricular Hypertrophy in Men Versus Women With Similar Levels of Hypertensive Clinic Blood Pressure** ..... 505

Joseph A. Diamond, Lawrence R. Krakoff, Kevin Martin, Sylvan Wallenstein, and Robert A. Phillips

**Relation of Left Ventricular Mass and QT Dispersion in Patients With Systematic Hypertension** ..... 508

Khachig Ichkhan, Janos Molnar, and John Somberg

**Heart Rate Variability Is Independent of Age, Gender, and Race in Congestive Heart Failure With a Recent Acute Exacerbation** ..... 511

Phyllis K. Stein, Kenneth E. Freedland, Judith A. Skala, Robert M. Carney, Victor Davila-Roman, Michael W. Rich, and Robert E. Kleiger

**Evaluation of the Significance of a Transvalvular Catheter on Aortic Valve Gradient in Aortic Stenosis: A Direct Hemodynamic and Doppler Echocardiographic Study** ..... 513

Chituru Adele, Paul T. Vaitkus, and Marc D. Tischler

**Stability of Left Atrial Spontaneous Echo Contrast at Repeat Transesophageal Echocardiography in Patients With Mitral Stenosis** ..... 516

Roger E. Peverill, John Gelman, Richard W. Harper, and Joseph J. Smolich

**Outcome of Pregnancy in Patients With Complex Pulmonic Valve Atresia** ..... 519

Heidi M. Connolly and Carole A. Warnes

**An Echocardiographic Study Comparing Male Swedish Elite Orienteers With Other Elite Endurance Athletes** ..... 521

Egil Henriksen, Johan Landelius, Lars Wesslén, Toomas Kangro, Tommy Jonason, Christina Nyström-Rosander, Urban Niklasson, Henrik Arnell, Christer Rolf, Eskil Hammarström, Christer Lidell, Ivar Ringqvist, and Göran Friman

**Serum Ferritin Is Not a Risk Factor for Extracranial Carotid Arterial Disease in Men and Women Aged  $\geq 60$  Years** ..... 525

Wilbert S. Aronow, Chul Ahn, and Myron R. Schoenfeld

**Effect of Acute Dynamic Exercise on Circulating Plasma Nitric Oxide Level and Correlation to Norepinephrine Release in Normal Subjects** ..... 526

Koichi Node, Masafumi Kitakaze, Hideyuki Sato, Yukihiro Koretsune, Yoshiki Katsube, Michiko Karita, Hiroaki Kosaka, and Masatsugu Hori

**Effect of Acute Cigarette Smoking on Endothelium-Dependent Brachial Artery Dilatation in Healthy Individuals** ..... 529

John Lekakis, Christos Papamichael, Costas Vemmos, John Nanas, Dimitrios Kontoyannis, Stamatios Stamatiopoulos, and Spyridon Mouloupoulos

## CASE REPORTS

**Effectiveness of Cardiac Transplantation for Primary (AL) Cardiac Amyloidosis** ..... 532

Frank Pelosi, Jr., John Capehart, and William C. Roberts

**Single Therapeutic Catheterization to Treat Coexisting Coarctation of the Aorta and Patent Ductus Arteriosus** ..... 535

Frank F. Ing, William S. McMahon, Greg L. Johnson, G. Wesley Vick, and Charles E. Mullins

**Intravascular Stenting as a Definitive Treatment of Spontaneous Carotid Artery Dissection** ..... 538

**MARCH 1, 1997, VOL. 79, NO. 5**

**CORONARY ARTERY DISEASE**

- Effects of Thrombolytic Regimen, Early Catheterization, and PredischARGE Angiographic Variables on Six-Week Left Ventricular Function** ..... 539  
Samuel R. Ward, Joseph M. Sutton, Karen S. Pieper, Markus Schwaiger, Robert M. Califf, and Eric J. Topol, for the TAMI Investigators

- Impact of Restenosis After Optimal Directional Coronary Atherectomy on Regional Left Ventricular Function** ..... 545  
Pierre Coste, Serge Sempé, Pierre Dos Santos, Catherine Jaïs, Abdallah Moussari, François Duclos, Simone Bonoron Adele, and Pierre Besse

- Long-Term Clinical Follow-Up After Directional Coronary Atherectomy** ..... 553  
Karanbir S. Grewal, Michael B. Jorgensen, Jean T. Diesto, Prakash W. Mansukhani, and Vicken J. Aharonian

- Angiographic Evolution of Intracoronary Thrombus and Dissection Following Percutaneous Transluminal Coronary Angioplasty (The Thrombolysis and Angioplasty in Unstable Angina [TAUSA] Trial)** ..... 559  
John A. Ambrose, Orlandino D. Almeida, Samin K. Sharma, George Dangas, and Denise E. Ratner, for the TAUSA Investigators

- Comparison of Verapamil Versus Felodipine on Heart Rate Variability After Acute Myocardial Infarction** ..... 564  
Domenico Bonaduce, Mario Petretta, Angiolino Ianniciello, Claudio Apicella, Vincenzo Cavallaro, and Fortunato Marciano

- Evolution of Late Potential Parameters in Thrombolized Acute Myocardial Infarction Might Predict Patency of the Infarct-Related Artery** ..... 570  
Dimitrios A. Kontoyannis, John N. Nanas, Sofocles A. Kontoyannis, Andreas K. Kalabalikis, and Spyridon D. Mouloupoulos

- Influence of Regional Cardiovascular Mortality on the Use of Angiography After Acute Myocardial Infarction** ..... 575  
Peter A. McCullough and William W. O'Neill

- Determinants of Appropriate Use of Angiotensin-Converting Enzyme Inhibitors After Acute Myocardial Infarction in Persons  $\geq 65$  Years of Age** ..... 581  
Harlan M. Krumholz, Viola Vaccarino, Edward F. Ellerbeck, Catarina Kiefe, John Hennen, Timothy F. Kresowik, Jay A. Gold, Stephen F. Jencks, and Martha J. Radford

- Persistent Reduction of Mortality for Five Years After One Year of Acebutolol Treatment Initiated During Acute Myocardial Infarction** ..... 587  
Michel Cucherat, Jean-Pierre Boissel, and Alain Leizorovicz, for the APSI Investigators

- Economic Implications of the Prophylactic Use of Intraaortic Balloon Counterpulsation in the Setting of Acute Myocardial Infarction** ..... 590

J. David Talley, E. Magnus Ohman, Daniel B. Mark, Barry S. George, Jeffrey D. Leimberger, Lisa G. Berdan, Linda Davidson-Ray, Millie Rawert, Lai Choi Lam, Harry R. Phillips, and Robert M. Califf, for the Randomized IABP Study Group

- Potential Cost Effectiveness of Initial Myocardial Perfusion Imaging for Assessment of Emergency Department Patients With Chest Pain** ..... 595  
Paul W. Radensky, Thomas C. Hilton, Holly Fulmer, Beth A. McLaughlin, and Stephen A. Stowers

- Prognostic Importance of Scintigraphic Left Ventricular Cavity Dilation During Intravenous Dipyridamole Technetium-99m Sestamibi Myocardial Tomographic Imaging in Predicting Coronary Events** ..... 600  
Joseph R. McClellan, Mark I. Travin, Steven D. Herman, John I. Baron, Robert J. Golub, James J. Gallagher, David Waters, and Gary V. Heller

- Supersensitive Dilator Response to Nitroglycerin But Not to Atrial Natriuretic Peptide in Spastic Coronary Arteries in Coronary Spastic Angina** ..... 606  
Kiyotaka Kugiyama, Masamichi Ohgushi, Seigo Sugiyama, Takeshi Motoyama, Hiroaki Kawano, Osamu Hirashima, and Hirofumi Yasue

**ARRHYTHMIAS AND CONDUCTION DISTURBANCES**

- Usefulness of Self-Administration of Intramuscular Lidocaine in the Prehospital Setting for Ventricular Tachyarrhythmias Unassociated With Acute Myocardial Infarction (The "Shahal" Experience in Israel)** ..... 611  
Arie Roth, Naomi Malov, Yoram Bloch, Zwi Schlesinger, Shlomo Laniado, and Elieser Kaplinski

- Evaluation of Left Atrial Appendage Function by Measurement of Changes in Flow Velocity Patterns After Electrical Cardioversion in Patients With Isolated Atrial Fibrillation** ..... 615  
Tomotsugu Tabata, Takashi Oki, Arata Iuchi, Hirotsugu Yamada, Kazuyo Manabe, Kazuyo Fukuda, Miho Abe, Nobuo Fukuda, and Susumu Ito

- Effect of Electrode Position on Outcome of Low-Energy Intracardiac Cardioversion of Atrial Fibrillation** ..... 621  
Eckhard Alt, Claus Schmitt, Richard Ammer, Andreas Plewan, Fred Evans, Jay Pasquantonio, Trey Ideker, Günter Lehmann, Katja Pütter, and Albert Schömig

- Thromboembolic Risks of Left Atrial Thrombus Detected by Transesophageal Echocardiogram** ..... 626  
Dominic Y. Leung, Patricia M. Davidson, Gregory B. Cranney, and Warren F. Walsh

**CONGESTIVE HEART FAILURE**

- Changes in Skeletal Muscle Morphology and Biochemistry After Cardiac Transplantation** ..... 630

Lizanne M. Bussi res, Peter W. Pflugfelder,  
Albert W. Taylor, Earl G. Noble, and William J. Kostuk

- Relation of Functional Improvement in Congestive Heart Failure After Quinapril Therapy to Peripheral Limitation** ..... 635  
Guillaume Jondeau, Jean-Claude Dib, Olivier Dubourg, and Jean-Pierre Bourdarias

## METHODS

- Comparison of Standard and Derived 12-Lead Electrocardiograms for Diagnosis of Coronary Angioplasty-Induced Myocardial Ischemia** ..... 639  
Barbara J. Drew, Mary G. Adams, Michele M. Pelter, Shu-Fen Wung, and Mary A. Caldwell
- Evaluation of Color Kinesis, A New Echocardiographic Method for Analyzing Regional Wall Motion in Patients With Dilated Left Ventricles** ..... 645  
Byron F. Vandenberg, Ron M. Oren, Jane Lewis, Susan Aeschilman, Trudy L. Burns, and Richard E. Kerber

## HISTORICAL STUDY

- Werner Forssmann: A Pioneer of Cardiology** ..... 651  
Renate Forssmann-Falck

## EDITORIAL

- Are Implantable Cardioverter-Defibrillators or Drugs More Effective in Prolonging Life?** ..... 661  
The Antiarrhythmics Versus Implantable Defibrillators (AVID) Trial Executive Committee

## BRIEF REPORTS

- Benefits of Cardiac Rehabilitation and Exercise Training in Elderly Women** ..... 664  
Carl J. Lavie and Richard V. Milani
- Effect of Intracoronary Estrogen on Coronary Collateral Blood Flow Velocity** ..... 666  
Efhia Sbarouni, Zenon S. Kyriakides, and Dimitrios Th. Kremastinos
- Determining Whether Acute Myocardial Infarction in Patients With Previous Coronary Bypass Grafting Is the Result of Narrowing of a Bypass Conduit or of a Native Coronary Artery** ..... 670  
Ra l Moreno, Esteban L pez de S , Jos  L pez-Send n, Rafael Rubio, Jaime F. Bobadilla, Eulogio J. Garc a, Juan L. Delc n
- Importance of Left Anterior Hemiblock Development in Inferior Wall Acute Myocardial Infarction** ..... 672  
Abid Assali, Samuel Sclarovsky, Itzhak Herz, Alejandro Solodky, Jacqueline Sulkes, and Boris Strasberg

- Frequency and Prognostic Significance of High-Degree Atrioventricular Block in Patients With a First Non-Q-Wave Acute Myocardial Infarction** ..... 674  
Moti Haim, Hanoeh Hod, Elieser Kaplinsky, Henrietta Reicher-Reiss, Jacob Barzilay, Valentina Boyko, Uri Goldbourt, and Solomon Behar, for the SPRINT Study Group

- Serum Lipid Profiles and the Presence of Yellow Plaque in Coronary Lesions In Vivo** ..... 676  
Katsuhiro Kitamura, Kyoichi Mizuno, Akira Miyamoto, and Haruo Nakamura

- The Acute Hemodynamic Effects of Right Ventricular Septal Pacing in Patients With Congestive Heart Failure Secondary to Ischemic or Idiopathic Dilated Cardiomyopathy** ..... 679  
Michael R. Gold, Stephen R. Shorofsky, Matthew D. Metcalf, Zenaida Feliciano, Michael L. Fisher, and Stephen S. Gottlieb

- Atrial Fibrillation Induced by Atrioventricular Nodal Reentrant Tachycardia** ..... 681  
Josep Brugada, Llu s Mont, Mariona Matas, and Francisco Navarro-L pez

- Electrophysiologic Characteristics and Radiofrequency Catheter Ablation of Fast-Slow Form Atrioventricular Nodal Reentrant Tachycardia** ..... 683  
Wen-Chung Yu, Shih-Ann Chen, Ching-Tai Tai, Shih-Huang Lee, Chern-En Chiang, Zu-Chin Wen, Chuen-Wang Chiou, Kwo-Chang Ueng, Yi-Jen Chen, Jin-Long Huang, and Mau-Song Chang

- Cost Effectiveness of Administration of Intravenous Anesthetics for Direct-Current Cardioversion by Nonanesthesiologists** ..... 686  
Michelle G. Tobin, Sergio L. Pinski, Patrick J. Tchou, Elizabeth A. Ching, and Richard G. Trohman

- Nature and Determinants of Skin "Burns" After Transthoracic Cardioversion** ..... 689  
Luis Pagan-Carlo, Mary Seabury Stone, and Richard E. Kerber

- Reduced Radiation During Cardiac Catheterization of Infants Using Acquisition Zoom Technology** ..... 691  
Robert D. Ross, Vijaya Joshi, David J. Carravallah, and W. Robert Morrow

- Echocardiographic Indexes of Rejection in Pediatric Cardiac Transplant Recipients Managed Without Maintenance Steroid Immunosuppression** ..... 693  
Kenji Harada, Mark D. Reller, Takahiro Shiota, Christopher P. Marcella, and David J. Sahn

- Hemodynamic Effects of Acute Caffeine Ingestion in Young Adults** ..... 696  
Alyse M. Bender, Richard L. Donnerstein, Ricardo A. Samson, David Zhu, and Stanley J. Goldberg

- Remodeling of Atherosclerotic Coronary Arteries Assessed With Intravascular Ultrasound In Vitro** ..... 699  
Elma J. Gussenhoven, Jim H. Geselschap, Winnifred van Lankeren, David J. Posthuma, and Aad van der Lugt



- Influence of Guiding Catheter Selection on the Measurement of Coronary Flow Reserve** ..... 703  
 Alexandre Abizaid, Ran Kornowski, Gary S. Mintz, Mun K. Hong, Augusto D. Picahrd, Kenneth M. Kent, Lowell F. Sattler, Jeffrey J. Popma, Orville Bramwell, and Martin B. Leon

- Elevated High-Density Lipoprotein Cholesterol, Not Protective in the Presence of Homocysteinemia** ..... 705  
 H. Robert Superko

- Saphenous Vein Graft Aneurysm Presenting as a Large Mediastinal Mass Compressing the Right Atrium** ..... 706  
 Alexandre C. Ferreira, Eduardo de Marchena, Mohammed I. Awaad, Alan Schob, and Kenneth M. Kessler

## MARCH 15, 1997, VOL. 79, NO. 6

### CORONARY ARTERY DISEASE

- Significance of Slow Upsloping ST-Segment Depression on Exercise Stress Testing** ..... 709  
 Vedat Sansoy, Denny D. Watson, and George A. Beller

- Comparison of Arbutamine and Exercise Echocardiography in Diagnosing Myocardial Ischemia** ..... 713  
 Ariel Cohen, Hélène Weber, Christophe Chauvel, Jean-Luc Monin, Jean-Claude Dib, Benoit Diebold, and Pascal Guéret

- Comparison of Short- and Long-Term Prognosis in Patients With Anterior Wall Versus Inferior or Lateral Wall Non-Q-Wave Acute Myocardial Infarction** ..... 717  
 Moti Haim, Hanoch Hod, Leonardo Reisin, Ran Kornowski, Henrietta Reicher-Reiss, Uri Goldbourt, Valentina Boyko, and Solomon Behar, for the Secondary Prevention Reinfarction Israeli Nifedipine Trial (SPRINT) Study Group

- Gender, Racial, and Geographic Differences in the Performance of Cardiac Diagnostic and Therapeutic Procedures for Hospitalized Acute Myocardial Infarction in Four States** ..... 722  
 Shimon Weitzman, Lawton Cooper, Lloyd Chambless, Wayne Rosamond, Limin Clegg, Gretchen Marcucci, Frederic Romm, and Alice White

- Comparison of Saruplase and Alteplase in Acute Myocardial Infarction** ..... 727  
 Frits W. Bär, Jürgen Meyer, Frank Vermeer, Rolf Michels, Bernard Charbonnier, Klaus Haerten, Martin Spiecker, Carlos Macaya, Michel Hanssen, Magda Heras, Jean P. Boland, Marie-Claude Morice, Francis G. Dunn, Rainer Uebis, Christian Hamm, Oded Ayzenberg, Gerhard Strupp, Adrie J. Wihagen, Werner Klein, Jürgen Windeler, Gwyn Hopkins, Hannes Barth, and Michael J.M. von Fisenne, for the SESAM Study Group

- Dobutamine-Induced ST-Segment Elevation in Patients With Acute Myocardial Infarction and the Role of Myocardial Ischemia, Viability, and Ventricular Dyssynergy** ..... 733

Roberto Ricci, Riccardo Bigi, Alfonso Galati, Paolo Bandini, Claudio Coletta, Cesare Fiorentini, Francesca Lumia, Giuseppe Occhi, and Vincenzo Ceci

- Cardiac Event Rates After Acute Myocardial Infarction in Patients Treated With Verapamil and Trandolapril Versus Trandolapril Alone** ..... 738  
 J. Fischer Hansen, Leif Hagerup, Bjarne Sigurd, Flemming Pedersen, Kresten Mellemegaard, O. Pedersen-Bjergaard, and Leif S. Mortensen, for the Danish Verapamil Infarction Trial (DAVIT) Study Group

- Levels of Expression of P-Selectin, E-Selectin, and Intercellular Adhesion Molecule-1 in Coronary Atherectomy Specimens from Patients With Stable and Unstable Angina Pectoris** ..... 742  
 Alan N. Tenaglia, Andrew J. Buda, Robert G. Wilkins, Michael K. Barron, Paul R. Jeffords, Khoa Vo, Maureen O. Jordan, Barry A. Kusnick, and David J. Lefer

- Impact of Diabetes Mellitus on Percutaneous Revascularization (CAVEAT-II)** ..... 748  
 Glenn N. Levine, Alice K. Jacobs, Gordon P. Keeler, Patrick L. Whitlow, Lisa G. Berdan, Fred Leya, Eric J. Topol, and Robert M. Califf, for the CAVEAT-II Investigators

### PREVENTIVE CARDIOLOGY

- Baseline Risk Factors and Their Association With Outcome in the West of Scotland Coronary Prevention Study** ..... 756  
 The West of Scotland Coronary Prevention Study Group

### SYSTEMIC HYPERTENSION

- Comparison of Single Versus Multiple Lifestyle Interventions: Are the Antihypertensive Effects of Exercise Training and Diet-Induced Weight Loss Additive?** ..... 763  
 Neil F. Gordon, Christopher B. Scott, and Benjamin D. Levine

### VALVULAR HEART DISEASE

- Clinical Symptoms of Mitral Valve Prolapse Are Related to Hypomagnesemia and Attenuated by Magnesium Supplementation** ..... 768  
 Barbara Lichodziejewska, Jadwiga Kłos, Joanna Rezler, Katarzyna Grudka, Maria Dłużniewska, Andrzej Budaj, and Leszek Ceremużyński

### CONGENITAL HEART DISEASE

- Value of Fast Gradient Echo Magnetic Resonance Angiography as an Adjunct to Coronary Arteriography in Detecting and Confirming the Course of Clinically Significant Coronary Artery Anomalies** ..... 773  
 Hubert W. Vliegen, Joost Doornbos, Albert de Roos, J. Wouter Jukema, Martijn A. Bekedam, and Ernst E. van der Wall

### MISCELLANEOUS

- Effect of Propionyl-L-Carnitine on Quality of Life in Intermittent Claudication** ..... 777

Gregorio Brevetti, Sergio Perna, Carlo Sabba, Vincenzo Domenico Martone, Antonietta Di Iorio, and Giuseppe Barletta

**Right-Sided Cardiac Tumors Detected by Transesophageal Echocardiography and Its Usefulness in Differentiating the Benign from the Malignant Ones ..... 781**

Mary Lynch, Stephen D. Clements, Jack S. Shanewise, Cyeng C. Chen, and Randolph P. Martin

**EDITORIALS**

**Mystery of QT<sub>c</sub> Interval Dispersion ..... 785**

Marek Malik and A. John Camm

**"Cardioprotection"—Not All Calcium Antagonists Are Created Equal: Second Round ..... 788**

Franz H. Messerli

**Using Serum Cholesterol as a Screening Test for Preventing Coronary Heart Disease: The Five Fundamental Flaws of the American College of Physicians Guidelines ..... 790**

James S. Forrester and Prediman K. Shah

**The Device With A Name On It ..... 793**

David R. Holmes Jr. and Kenneth M. Kent

**Practical Guidelines for Initiation of Beta-Adrenergic Blockade in Patients With Chronic Heart Failure ..... 794**

Eric J. Eichhorn and Michael R. Bristow

**BRIEF REPORTS**

**Plasma Total Homocysteine and Risk of Angina Pectoris With Subsequent Coronary Artery Bypass Surgery ..... 799**

Petra Verhoef, Charles H. Hennekens, Robert H. Allen, Sally P. Stabler, Walter C. Willett, and Meir J. Stampfer

**Transluminal Extraction Atherectomy for Restenosis Following Palmaz-Schatz Stent Implantation ..... 801**

Kazuhiro Hara, Yuji Ikari, Tsutomu Tamura, and Tetsu Yamaguchi

**Coronary Flow Reserve Assessed by Transesophageal Echocardiography Identifies Early Restenosis of the Left Anterior Descending Coronary Artery Angioplasty ..... 803**

Ioannis A. Paraskevaidis, Demosthenes G. Katritsis, Dimitrios P. Tsiapras, Zenon S. Kyriakides, Socrates T. Korovesis, and Dimitrios Th. Kremastinos

**Left Atrial Abnormality in Acute Myocardial Infarction ..... 807**

Anurag Mehta, Abnash C. Jain, Mahaveer C. Mehta, and Mike Billie

**Usefulness of the Lymphocyte Concentration as a Prognostic Marker in Coronary Artery Disease ..... 812**

Steven R. Ommen, Raymond J. Gibbons, David O. Hodge, and Stephen P. Thomson

**Prospective Assessment of the Minimum Energy Needed for External Electrical Cardioversion of Atrial Fibrillation ... 815**

Philippe Ricard, Samuel Lévy, Jacques Trigano, Franck Paganelli, Emile Daoud, K. Ching Man, S. Adam Strickberger, and Fred Morady

**Effects of the Ventricular Activation Sequence on the JT Interval ..... 816**

Jeffrey Banker, José Dizon, and James Reiffel

**Spontaneous Ventricular Tachycardia Treated by Antiarrhythmia Pacing ..... 820**

Nadim Nasir, Jr., Antonio Pacifico, Timothy K. Doyle, Nan R. Earle, Mike L. Hardage, Philip D. Henry, and the Cadence Investigators

**Utility of PredischARGE and One-Month Transvenous Implantable Defibrillator Tests ..... 822**

Jeffrey J. Goldberger, George Horvath, Shmuel Inbar, and Alan H. Kadish

**Cardiovascular Effects of a Trandolapril/Verapamil Combination in Patients With Mild to Moderate Essential Hypertension ..... 826**

Franz C. Aepfelbacher, Franz H. Messerli, Eduardo Nunez, and Leszek Michalewicz

**Transthoracic Echocardiographic Assessment of Periprosthetic Mitral Regurgitation Using Intravenous Injection of Sonicated Albumin ..... 829**

Andressa Giestas Rodrigues, Jean-Claude Tardif, Manuel Dominguez, Lise-Andrée Mercier, Robert Petitclerc, Guy Pelletier, and Denis Burelle

**Comparison of the Functional Significance of Left Ventricular Hypertrophy in Hypertrophic Cardiomyopathy and Glycogenosis Type III ..... 834**

Philip J. Lee, John E. Deanfield, Michael Burch, Kamran Baig, William J. McKenna, and James V. Leonard

**Balloon Pulmonary Valvuloplasty for Pulmonary Valve Stenosis With Atrial Septal Defect ..... 838**

Mitsuru Nakasato, Hiroshi Suzuki, Satoshi Sato, Haruki Komatsu, and Kiyoshi Hayasaka

**CASE REPORT**

**Survival Following Blunt Chest Impact-Induced Cardiac Arrest During Sports Activities in Young Athletes ..... 840**

Barry J. Maron, Janette F. Strasburger, John D. Kugler, Bruce M. Bell, Frank D. Brodkey, and Liviu C. Poliac

**APRIL 1, 1997, VOL. 79, NO. 7**

**CORONARY ARTERY DISEASE**

**Effect on Survival of Estrogen Replacement Therapy After Coronary Artery Bypass Grafting ..... 847**

Jay M. Sullivan, Faten El-Zeky, Roger Vander Zwaag, and K.B. Ramanathan

**Usefulness of Serial Radionuclide Angiography in Predicting Cardiac Death After Coronary Artery Bypass**

<b>Grafting and Comparison With Clinical and Cardiac Catheterization Data</b> .....	851
Salvador Borges-Neto, Leslee J. Shaw, Karen Kesler, Timothy Sell, Eric D. Peterson, R. Edward Coleman, and Robert H. Jones	

<b>Noninvasive, Three-Dimensional Visualization of Coronary Artery Bypass Grafts by Electron Beam Tomography</b> ...	856
Stephan Achenbach, Werner Moshage, Dieter Ropers, Jörg Nossen, and Kurt Bachmann	

<b>Further ST Elevation at Reperfusion by Direct Percutaneous Transluminal Coronary Angioplasty Predicts Poor Recovery of Left Ventricular Systolic Function in Anterior Wall AMI</b> .....	862
Nobuhiko Kobayashi, Nobuhiro Ohmura, Ikuko Nakada, Takanori Yasu, Hisakazu Iwanaka, Norifumi Kubo, Takaaki Katsuki, Mikiyoshi Fujii, Toshio Yaginuma, and Muneyasu Saito	

<b>Use of Evidence-Based Medical Therapy in Patients Undergoing Percutaneous Coronary Revascularization in the United States, Europe, and Canada</b> .....	867
Mark J. Eisenberg, Robert M. Califf, Eric A. Cohen, Allan G. Adelman, Daniel B. Mark, and Eric J. Topol, for the CAVEATH and CCAT Investigators	

<b>Frequency, Risk Factors, and Outcome for Bacteremia After Percutaneous Transluminal Coronary Angioplasty</b> .....	873
Matthew H. Samore, Mireya A. Wessolowsky, Stanley M. Lewis, Samuel J. Shubrooks, Jr., and Adolf W. Karchmer	

<b>Differential Expression of 92-kDa Gelatinase in Primary Atherosclerotic Versus Restenotic Coronary Lesions</b> .....	878
David L. Brown, Margaret S. Hibbs, Marianne Kearney, and Jeffrey M. Isner	

<b>Impact of Severity of Coronary Artery Stenosis and the Collateral Circulation on the Functional Outcome of Dyssynergic Myocardium After Revascularization in Patients With Healed Myocardial Infarction and Chronic Left Ventricular Dysfunction</b> .....	883
Abdou Elhendy, Jan H. Cornel, Jos R.T.C. Roelandt, Peter R. Nierop, Ron T. van Domburg, Marcel L. Geleijnse, Giuseppe Trocino, Jeroen J. Bax, M. Mohsen Ibrahim, and Paolo M. Fioretti	

<b>Anginal Status and Prediction of Cardiac Events in Patients Enrolled in the Asymptomatic Cardiac Ischemia Pilot (ACIP) Study</b> .....	889
C. Richard Conti, Nancy L. Geller, Genell L. Knatterud, Sandra A. Forman, Craig M. Pratt, Carl J. Pepine, and George Sopko, for the ACIP Investigators	

<b>Effect of Pravastatin (10 mg/day) on Progression of Coronary Atherosclerosis in Patients With Serum Total Cholesterol Levels from 160 to 220 mg/dl and Angiographically Documented Coronary Artery Disease</b> .....	893
Akira Tamura, Yoshiaki Mikuriya, Masaru Nasu, and the Coronary Artery Regression Study (CARS) Group	

<b>Significance of Negative U Waves in the Precordial Leads During Anterior Wall Acute Myocardial Infarction</b> .....	897
Akira Tamura, Toru Watanabe, Kimiaki Nagase, Yoshiaki Mikuriya, and Masaru Nasu	

<b>Coronary Stenting (Cordis) Without Anticoagulation</b> ....	901
Seong-Wook Park, Seung-Jung Park, Myeong-Ki Hong, Jae-Joong Kim, Seung-Yun Cho, Yang-Soo Jang, Kwon-Bae Kim, Kee-Sik Kim, Dong-Joo Oh, Byung-Hee Oh, and Jung-Chaee Kang	

## ARRHYTHMIAS AND CONDUCTION DISTURBANCES

<b>Comparison of Oral Propafenone and Sotalol as an Initial Treatment in Patients With Symptomatic Paroxysmal Atrial Fibrillation</b> .....	905
Shih-Huang Lee, Shih-Ann Chen, Ching-Tai Tai, Chern-En Chiang, Zu-Chi Wen, Yi-Jen Chen, Wen-Chung Yu, Jin-Long Huang, Ann-Ning Fong, Jun-Jack Cheng, and Mau-Song Chang	

## CONGESTIVE HEART FAILURE

<b>Effect of Antithrombotic Therapy on Risk of Sudden Coronary Death in Patients With Congestive Heart Failure</b> .....	909
Daniel L. Dries, Michael J. Domanski, Myron A. Wacławski, and Bernard J. Gersh	

## VALVULAR HEART DISEASE

<b>Determinants of Functional Capacity in Chronic Mitral Regurgitation Unassociated With Coronary Artery Disease or Left Ventricular Dysfunction</b> .....	914
Dominic Y. Leung, Brian P. Griffin, Claire E. Snader, Lynn Luthern, James D. Thomas, and Thomas H. Marwick	

## METHODS

<b>Clinical Application of Pulsed Doppler Tissue Imaging for Assessing Abnormal Left Ventricular Relaxation</b> .....	921
Takashi Oki, Tomotsugu Tabata, Hirotugu Yamada, Tetsuzo Wakatsuki, Hisanori Shinohara, Akiyoshi Nishikado, Arata Iuchi, Nobuo Fukuda, and Susumu Ito	

## INTERVIEW

<b>MICHAEL ELLIS DEBAKEY: A Conversation With the Editor</b> .....	929
William C. Roberts	

## BRIEF REPORTS

<b>Serial Intravascular Ultrasound Predictors of Restenosis at the Margins of Palmaz-Schatz Stents</b> .....	951
Rainer Hoffmann, Gary S. Mintz, Kenneth M. Kent, Lowell F. Satler, Augusto D. Pichard, Jeffrey J. Popma, and Martin B. Leon	

<b>Association of Systolic Blood Pressure at Time of Myocardial Ischemia With Angina Pectoris During Exercise Testing</b> .....	954
Brian M. Go, David Sheffield, Rungroj Kittayaphong, William Maixner, and David S. Sheps	

**Relationship Between Plasma Endothelin-1 Levels and Myocardial Ischemia Induced by Exercise Testing** ..... 957  
Fiorella Fontana, Giovanni Tarsi, Stefano Boschi, Rosaria De lasio, Nino Monetti, and Raffaele Bugiardini

**Technetium-99m-HMPAO Brain SPECT in Patients With Syndrome X** ..... 959  
Bernd Weidmann, Wolfgang C. Jansen, Axel Bock, Josef Ascheuer, and Michael O. Tauchert

**Insulin-Like Growth Factor-I, Insulin, and Angina Pectoris Secondary to Coronary Atherosclerosis, Vasospasm, and Syndrome X** ..... 961  
Hans Erik Bøker, Christian Skjærbaek, Ulrik H. Eriksen, Ole Schmitz, and Hans Ørskov

**Does Subclinical Hypothyroidism Explain the Increased Susceptibility of Women to Torsades de Pointes?** ..... 963  
Michael H. Lehmann, Debra Frankovich, John J. Baga, Luis A. Pires, Claudio D. Schuger, Russell T. Steinman, and Steven L. Robinow

**Effect of the Maze Procedure for Atrial Fibrillation on Atrial and Brain Natriuretic Peptide** ..... 966  
Motoyuki Nakamura, Hiroyuki Niinuma, Makoto Chiba, Kenji Ueshima, Naoshi Arakawa, Yoko Yagi, Kouhei Kawazoe, and Katsuhiko Hiramori

**Dispersion of Ventricular Activation and Refractoriness in Patients With Idiopathic Dilated Cardiomyopathy** ..... 970  
Jay L. Dinerman, Ronald Berger, Mark C.P. Haigney, John H. Lawrence, Gordon F. Tomaselli, and Hugh Calkins

**Results of Radiofrequency Ablation in Patients With Clinically Documented, but Noninducible, Atrioventricular Node Reentrant Tachycardia and Orthodromic Atrioventricular Reciprocating Tachycardia** ..... 974  
Shih-Huang Lee, Shih-Ann Chen, Chern-En Chiang, Ching-Tai Tai, Zu-Chi Wen, Kwo-Chang Ueng, Chuen-Wang Chiou, Yi-Jen Chen, Wen-Chung Yu, Jin-Long Huang, Jun-Jack Cheng, and Mau-Song Chang

**Prognostic Value of Heart Rate Variability in Chronic Congestive Heart Failure Secondary to Idiopathic or Ischemic Dilated Cardiomyopathy** ..... 978  
Balázs M. Szabó, Dirk J. van Veldhuisen, Nancy van der Veer, Jan Brouwer, Pieter A. De Graeff, and Harry J.G.M. Crijns

**Elevated Levels of Circulating Soluble Adhesion Molecules in Patients With Nonrheumatic Aortic Stenosis** ..... 980  
Chandreshwar N. Shahi, Nitin K. Ghaisas, Michael Goggins, Brendan Foley, Peter Crean, Dermot Kelleher, and Michael Walsh

**Growth of the Right Heart After Balloon Valvuloplasty for Critical Pulmonary Stenosis in the Newborn** ..... 982  
Harm Velis, Karen H. Raines, Andrew S. Bensky, and Wesley Covitz

**Telephone Reporting of Cardiac Procedure Results to Primary Care Physicians** ..... 984

James C. Blankenship, Jon F. Scheiber, and Francis J. Menapace

**Usefulness of Preoperative Noninvasive Radionuclide Testing for Detecting Coronary Artery Disease in Candidates for Liver Transplantation** ..... 986  
Vladimir A. Kryzhanovskii and George A. Beller

**Results of Heart Transplantation in Patients with Preexisting Malignancies** ..... 988  
Michael M. Koerner, Gero Tenderich, Kazutomo Minami, Hermann Mannebach, Heinrich Koertke, Edzard zu Knyphausen, Aly El-Banayasy, Detlev Baller, Knut Kleesiek, Ulrich Gleichmann, Hans Meyer, and Reiner Koerfer

**Association of Extracranial Carotid Arterial Disease, Prior Atherothrombotic Brain Infarction, Systemic Hypertension, and Left Ventricular Hypertrophy With the Incidence of New Atherothrombotic Brain Infarction at 45-Month Follow-Up in 1,482 Older Patients** ..... 991  
Wilbert S. Aronow, Chul Ahn, Itzhak Kronzon, Hal Gutstein, and Myron R. Schoenfeld

**Genetic Heterogeneity of Familial Atrial Myxoma Syndromes (Carney Complex)** ..... 994  
Craig T. Basson, Calum A. MacRae, Bruce Korf, and Andrew Merliss

**Overview of the Safety of Felodipine Based on Clinical Trials in Patients With Hypertension** ..... 996  
Lennart Welin, Lars Elvelin, Anne Niklasson, Gunnar Olsson, and Dag Elmfeldt

## APRIL 15, 1997, VOL. 79, NO. 8

### CORONARY ARTERY DISEASE

**Outcome  $\geq 10$  Years After Successful Percutaneous Transluminal Coronary Angioplasty** ..... 1005  
David Hasdai, Malcolm R. Bell, Diane E. Grill, Peter B. Berger, Kirk N. Garratt, Charanjit S. Rihal, LaVon N. Hammes, and David R. Holmes, Jr.

**Removal of Thrombus from Aortocoronary Bypass Grafts and Coronary Arteries Using the 6Fr Hydrolyser** ..... 1012  
Vincent G. van Ommen, Arjan A. van den Bos, Michael Pieper, Peter den Heyer, Martin R. Thomas, S. Özbeck, Frits W. Bär, and Hein J.J. Wellens

**Comparison of Preoperative Characteristics of Men and Women Undergoing Coronary Artery Bypass Grafting (The Post Coronary Artery Bypass Graft [CABG] Biobehavioral Study)** ..... 1017  
Susan M. Czajkowski, Michael Terrin, Ruth Lindquist, Byron Hoogwerf, Gilles Dupuis, Sally A. Shumaker, J. Richard Gray, J. Alan Herd, Diane Treat-Jacobson, Steven Zyzanski, and Genell L. Knatterud, for the POST CABG Biobehavioral Study Investigators



**Additional Antianginal and Anti-Ischemic Efficacy of Mibefradil in Patients Pretreated With a Beta Blocker for Chronic Stable Angina Pectoris** ..... 1025

Joseph S. Alpert, Isaac Kobrin, Vincent DeQuattro, Richard Friedman, Alexander Shepherd, Paul E. Fenster, and Udho Thadani

**Prognostic Significance of Systolic Blood Pressure Changes During Dobutamine-Atropine Stress Technetium-99m Sestamibi Perfusion Scintigraphy in Patients With Chest Pain and Known or Suspected Coronary Artery Disease** ..... 1031

Marcel L. Geleijnse, Abdou Elhendy, Ron T. van Domburg, Riccardo Rambaldi, Ambroos E.M. Reijts, Jos R.T.C. Roelandt, and Paolo M. Fioretti

**Quantitative Evaluation of the Segmental Left Ventricular Response to Dobutamine Stress by Tissue Doppler Echocardiography** ..... 1036

William E. Katz, Vijay K. Gulati, Christine M. Mahler, and John Gorcsan III

**ARRHYTHMIAS AND CONDUCTION DISTURBANCES**

**Risk of Thromboembolism in Chronic Atrial Flutter** .... 1043

Kathryn A. Wood, Susan J. Eisenberg, Jonathan M. Kalman, Barbara J. Drew, Leslie A. Saxon, Randall J. Lee, Michael D. Lesh, and Melvin M. Scheinman

**Sotalol for Ventricular Tachyarrhythmias: Beta-Blocking and Class III Contributions, and Relative Efficacy Versus Class I Drugs After Prior Drug Failure** ..... 1048

James A. Reiffel, Elizabeth Hahn, Vernon Hartz, and Michael J. Reiter, for the ESVEM Investigators

**Predictors of Long-Term Survival in Patients With Malignant Ventricular Arrhythmias** ..... 1054

J. Anthony Gomes, Davendra Mehta, John Ip, Stephen L. Winters, Jorge Camunas, Arisan Ergin, Teri T. Newhouse, and Elena Pe

**Incidence of Arrhythmias in Normal Pregnancy and Relation to Palpitations, Dizziness, and Syncope** ..... 1061

Avraham Shotan, Enrique Ostrzega, Anilkumar Mehra, Janet V. Johnson, and Uri Elkayam

**SYSTEMIC HYPERTENSION**

**Effects of Atenolol Versus Enalapril on Cardiovascular Fitness and Serum Lipids in Physically Active Hypertensive Men** ..... 1065

Neil F. Gordon, Christopher B. Scott, and John J. Duncan

**Usefulness of Subnormal Midwall Fractional Shortening in Predicting Left Ventricular Exercise Dysfunction in Asymptomatic Patients With Systemic Hypertension** .. 1070

Adam E. Schussheim, Richard B. Devereux, Giovanni de Simone, Jeffrey S. Borer, Edmund McM. Herrold, and John H. Laragh

**EDITORIAL**

**Contemporary Cardiac Rehabilitation Services** ..... 1075

Barry A. Franklin, Linda Hall, and Gerald C. Timmis

**INTERVIEW**

**DENTON ARTHUR COOLEY, MD: A Conversation With the Editor** ..... 1078

Dr. Denton Arthur Cooley is interviewed by Dr. William C. Roberts.

**BRIEF REPORTS**

**F-18-Fluorodeoxyglucose PET Imaging Alters Clinical Decision Making in Patients With Impaired Ventricular Function** ..... 1092

Rob S.B. Beanlands, Robert A. deKemp, Stuart Smith, Helen Johansen, and Terrence Ruddy, with the technical and nursing assistance of May Aung and Barbara Aubrey

**Use of Lipid-Lowering Medication in Patients With Acute Myocardial Infarction (Worcester Heart Attack Study)** ..... 1095

Robert J. Goldberg, Ira S. Ockene, Jorge Yarzebski, Judith Savageau, and Joel M. Gore

**Effect of Cilostazol in Preventing Restenosis After Percutaneous Transluminal Coronary Angioplasty** ..... 1097

Shunsuke Take, Masahide Matsutani, Hiroyasu Ueda, Hidehito Hamaguchi, Hiroki Konishi, Yuji Baba, Hitoshi Kawaratani, Tetsuro Sugiura, Toshiiji Iwasaka, and Mitsuo Inada

**The Alpha-1 Adrenergic Blocking Agent Urapidil Counteracts Postrotational Atherectomy "Elastic Recoil" Where Nitrates Have Failed** ..... 1100

Luisa Gregorini, Jean Marco, Monique Bernies, Bernard Cassagneau, Guido Pomidossi, Gian Battista Anguissola, and Jean Fajadet

**Frequency and Outcome of Development of Coronary Artery Aneurysm After Intracoronary Stent Placement and Angioplasty** ..... 1104

Paul A. Slota, David L. Fischman, Michael P. Savage, Randal Rake, and Sheldon Goldberg, for the STRESS Trial Investigators

**Angioscopic Assessment of Coronary Lesions Underlying Thrombus** ..... 1106

Sergio Waxman, Murray A. Mittleman, Stuart W. Zarich, Philip J. Fitzpatrick, Stanley M. Lewis, David E. Leeman, Samuel J. Shubrooks Jr., John T. Snyder, James E. Muller, and Richard W. Nesto

**Are Monitored Telemetry Beds Necessary for Patients With Nontraumatic Chest Pain and Normal or Nonspecific Electrocardiograms?** ..... 1110

Judd E. Hollander, Sharon M. Valentine, Charles F. McCuskey, and Gerard X. Brogan, Jr.

- Effects of Intensive Diet and Exercise Intervention in Patients Taking Cholesterol-Lowering Drugs** ..... 1112  
R. James Barnard, Steven C. DiLauro, and Stephen B. Inkeles

- Effectiveness of Digitalis With or Without Acebutolol in Preventing Atrial Arrhythmias After Coronary Artery Surgery** ..... 1114  
Peter R. Kowey, David A. Dalessandro, Robert Herbertson, Bettye Briggs, Mary Ann C. Wertan, Seth J. Rials, Roland A. Filart, and Roger A. Marinchak

- Reasons for Underuse of Angiotensin-Converting Enzyme Inhibitors in Patients With Heart Failure and Left Ventricular Dysfunction** ..... 1118  
Bradley A. Bart, Wendy A. Gattis, Susan J. Diem, and Christopher M. O'Connor

- Oxygen Transport to Muscle During Exercise in Chronic Congestive Heart Failure Secondary to Idiopathic Dilated Cardiomyopathy** ..... 1120  
PierGuiseppe Agostoni, Karlman Wasserman, Giovanni Battista Perego, Gian Carlo Marenzi, Marco Guazzi, Emilio Assanelli, Gianfranco Lauri, and Maurizio D. Guazzi

- Role of Maximal Oxygen Consumption in Establishment of Heart Transplant Candidacy for Heart Failure Patients With Intermediate Exercise Tolerance** ..... 1124  
Walter Kao, Elaine M. Winkler, Maryl R. Johnson, William Piccione, Robert Lichtenberg, and Maria Rosa Costanzo

- Circulating Interleukin-6 in Severe Heart Failure** ..... 1128  
Guy A. MacGowan, Douglas L. Mann, Robert L. Kormos, Arthur M. Feldman, and Srinivas Murali

- Effect of Mitral Valvuloplasty in Mitral Stenosis on Coagulation Activity** ..... 1131  
Keiji Yamamoto, Uichi Ikeda, Kenyo K. Minezaki, Hiroshi Fukazawa, Osamu Mizuno, Seungbum Kim, Hideyuki Fujikawa, Hiromichi Sekiguchi, and Kazuyuki Shimada

- Human Chagasic Disease Is Not Associated With an Antiheart Humoral Response** ..... 1135  
M. Kamran Baig, Oscar Salomone, Alida L.P. Caforio, Jonathan H. Goldman, Marcos Amuchastegui, Tomàs Caiero, and William J. McKenna

- Apoptosis as a Possible Cause of Wall Thinning in End-Stage Hypertrophic Cardiomyopathy** ..... 1137  
Toshihiro Ino, Kei Nishimoto, Mataichi Okubo, Katsumi Akimoto, Keijiro Yabuta, Sachio Kawai, Ryoza Okada, and Noriyoshi Sueyoshi

- Usefulness of Repeat Balloon Aortic Valvuloplasty in Children** ..... 1141  
David Shim, Thomas R. Lloyd, and Robert H. Beekman III

- Comparison of Hospital Charges for Balloon Angioplasty and Surgical Repair in Children With Native Coarctation of the Aorta** ..... 1143  
David Shim, Thomas R. Lloyd, Catherine P. Moorehead, Edward L. Bove, Ralph S. Mosca, and Robert H. Beekman III

- Operative Mortality and Frequency of Coexistent Anomalies in Interruption of the Aortic Arch** ..... 1147  
Christine B. Powell, Frederic M. Stone, Dianne L. Atkins, David G. Watson, and James H. Moller

- Usefulness of Transesophageal Echocardiography in Detecting Changes in Flow Dynamics Responsible for Malperfusion Phenomena Observed During Surgery of Aortic Dissection** ..... 1149  
Elena Yamada, Makoto Matsumura, Sosuke Kimura, Shunei Kyo, Keisuke Ueda, Yuji Yokote, and Ryoza Omoto

- Evaluation of Cardiac Rhythm Disturbances During Extravehicular Activity** ..... 1153  
Alfred C. Rossum, Margie L. Wood, Sheryl L. Bishop, Heidi Deblock, and John B. Charles

- Atherosclerotic Cardiovascular Mortality During the 1992 Riots in Los Angeles** ..... 1155  
Yochai Birnbaum, Robert A. Kloner, Rebecca Perritt, and Kenneth Poole

## MAY 1, 1997, VOL. 79, NO. 9

### CORONARY ARTERY DISEASE

- Effect of Continuous Quality Improvement Analysis on the Delivery of Primary Percutaneous Transluminal Coronary Angioplasty for Acute Myocardial Infarction** ..... 1159  
Ronald P. Caputo, Kalon K.L. Ho, Robert C. Stoler, Craig A. Sukin, John J. Lopez, David J. Cohen, Richard E. Kuntz, Aaron Berman, Joseph P. Carrozza, and Donald S. Baim

- Prognostic Value of Doppler Transmitral Flow Velocity Patterns in Acute Myocardial Infarction** ..... 1165  
Konomi Sakata, Shuji Kashiro, Shunkichi Hirata, Atsuo Yanagisawa, and Kyoza Ishikawa

- Correlates of Unrecognized Acute Myocardial Infarction Detected Via Perfusion Imaging** ..... 1170  
Mark A. Lumley, Tracey Torosian, Laurenn L. Rowland, Mark W. Ketterer, and Sol D. Pickard

- Cardiac Autonomic Function and Sensitivity to Pain in Postmenopausal Women With Angina and Normal Coronary Arteries** ..... 1174  
Gaetano Antonio Lanza, Vincenzo Pasceri, Giuseppe Colonna, Francesco Cucinelli, Antonio Fortini, Antonio Lanzzone, Filippo Crea, and Attilio Maseri

### ARRHYTHMIAS AND CONDUCTION DISTURBANCES

- Mortality Benefit of Implantable Cardioverter-Defibrillator Therapy in Patients With Persistent Malignant Ventricular Arrhythmias Despite Amiodarone Treatment** ..... 1180  
Hal V. Barron, Hafiza H. Khan, Sami Viskin, Karin Heller, Jonathan M. Kalman, Melvin M. Scheinman, and Michael D. Lesh

**Influence of Patient Characteristics in the Selection of Patients for Defibrillator Implantation (The AVID Registry) .....**

**1185**

Anne B. Curtis, Alfred P. Hallstrom, Richard C. Klein, Sunil Nath, Sergio L. Pinski, Andrew E. Epstein, D. George Wyse, David S. Cannom, Ellen Renfroe, and the AVID Investigators

**QT Interval Dispersion in Healthy Subjects and Survivors of Sudden Cardiac Death: Circadian Variation in a Twenty-Four Hour Assessment .....**

**1190**

Janos Molnar, James E. Rosenthal, Jerry S. Weiss, and John C. Somberg

**Circannual Variation of Malignant Ventricular Tachyarrhythmias in Patients With Implantable Cardioverter-Defibrillators and Either Coronary Artery Disease or Idiopathic Dilated Cardiomyopathy .....**

**1194**

Roland P. Fries, Armin G. Heisel, Jens K. Jung, and Hermann J. Schieffer

**Atrial Fibrillation Follow-Up Investigation of Rhythm Management — The AFFIRM Study Design .....**

**1198**

The Planning and Steering Committees of the AFFIRM Study for the NHLBI AFFIRM Investigators

**CARDIOMYOPATHY**

**Usefulness of Signal-Averaged Electrocardiography in Evaluation of Idiopathic-Dilated Cardiomyopathy in Families .....**

**1203**

Gang Yi, Philip J. Keeling, Katerina Hnatkova, Jonathan H. Goldman, Marek Malik, and William J. McKenna

**INTERVIEW**

**Joseph Stephen Alpert, MD: A Conversation With the Editor .....**

**1208**

**LITERATURE AND MEDICINE**

**Literature and Medicine: The Human Experience .....**

**1222**

Helle Mathiasen

**EDITORIAL**

**The Pacemaker Syndrome — A Matter of Definition .....**

**1226**

Kenneth A. Ellenbogen, David M. Gilligan, Mark A. Wood, Carlos Morillo, and S. Serge Barold

**BRIEF REPORTS**

**Early Deterioration After Excimer Laser-Assisted Coronary Angioplasty .....**

**1230**

Elias Garcia-Cantu, Thierry Corcos, Xavier Favereau, Marcel Toussaint, Marco Zimarino, Yves Guérin, and François Baget

**Incidence and Impact on Outcome of Streptokinase Allergy in the GUSTO-I Trial .....**

**1232**

Teressa S.M. Tsang, Robert M. Califf, Amanda L. Stebbins, Kerry L. Lee, Shyuan Cho, Allan M. Ross, and Paul W. Armstrong, for the GUSTO-I Investigators

**Left Ventricular Size Determined by Electron Beam Computed Tomography Predicts Significant Coronary Artery Disease and Events .....**

**1236**

Pauline Woo, Songshao Mao, Shaojun Wang, and Robert C. Detrano

**Radial Versus Femoral Approach for Diagnostic Coronary Angiography in Stable Angina Pectoris .....**

**1239**

Peter F. Ludman, Nigel G. Stephens, Alun Harcombe, Martin D. Lowe, Leonard M. Shapiro, Peter M. Schofield, Michael C. Petch

**Myocardial Injury After Electrical Therapy for Cardiac Arrhythmias Assessed by Troponin-T Release .....**

**1241**

Mikael Runsiö, Anders Kallner, Göran Källner, Mårten Rosenqvist, and Lennart Bergfeldt

**Absence of Human Herpesvirus 8 Genomes in Coronary Atherosclerosis in Immunocompetent Patients .....**

**1245**

Dongsheng Ye, Timothy C. Nichols, Gregory J. Dehmer, David A. Tate, Robert S. Webb, and E. Byrd Quinlivan

**Efficacy of Atorvastatin in Primary Hypercholesterolemia .....**

**1248**

Japan Cholesterol Lowering Atorvastatin Study (J-CLAS) Group

**Effect of Sustained-Release Verapamil on the Morning Systemic Arterial Pressure Surge During Daily Activity in Patients With Systemic Hypertension .....**

**1252**

Guido A. Rosito, Otavio C.E. Gebara, Carol A. McKenna, Harold S. Solomon, James E. Muller, and Geoffrey H. Toller

**Disparity Between Diastolic Mitral Flow Characteristics and Left Ventricular Mass in Essential Hypertension .....**

**1255**

Miguel Zabalgaitia, S. Noor Ur Rahman, William E. Haley, Lori Oneschuk, Steven Yarows, Carla Yunis, Charles Lucas, William Linn, Lisa Krause, and John Amerena

**Comparison of Adaptations to a 12-Month Exercise Program and Late Outcome in Patients With Healed Myocardial Infarction and Ejection Fraction <45% and >50% .....**

**1258**

Ali A. Ehsani, Tom R. Miller, Therese A. Miller, Elizabeth A. Ballard, and Kenneth B. Schechtman

**Isometric Handgrip Exercise Increases Endothelin-1 Plasma Levels in Patients With Chronic Congestive Heart Failure .....**

**1261**

Enrico Mangieri, Gaetano Tanzilli, Francesco Barilla, Massimo Ciavolella, Gianluca Serafini, Marcello Nardi, Francesco Mangiaracina, Giovanni Scibilia, Louis J. Dell'Italia, and Pietro P. Campa

**Exercise-Related Ventilatory Abnormalities and Survival in Congestive Heart Failure .....**

**1264**

Guy A. MacGowan, Karen Janosko, Alfred Cecchetti, and Srinivas Murali

**Skeletal Muscle Atrophy and Peak Oxygen Consumption in Heart Failure .....**

**1267**

Michael J. Toth, Stephen S. Gottlieb, Michael L. Fisher, and Eric T. Poehlman

- Mitral and Tricuspid Valve Aneurysms Evaluated by Transesophageal Echocardiography** ..... 1269  
Michael Mollod, Kevin J. Felner, and Joel M. Felner

- Transgastric Doppler Echocardiographic Assessment of the Severity of Aortic Stenosis Using Multiplane Transesophageal Echocardiography** ..... 1273  
Friedrich C. Blumberg, Michael Pfeifer, Stephan R. Holmer, Eckhard P. Kromer, Günter A.J. Riegger, and Dietmar Elsner

- Long-Term Prognosis in Patients With Alcoholic Cardiomyopathy and Severe Heart Failure After Total Abstinence** ..... 1276  
Philippe Guillo, Jacques Mansourati, Benoit Maheu, Yves Etienne, Karine Provost, Olivier Simon, and Jean-Jacques Blanc

- Transcatheter Closure of Patent Ductus Arteriosus Using Coils** ..... 1279  
Ziyad M. Hijazi and Robert L. Geggel

- Cost-Effectiveness of Transaxillary Muscle-Sparing Same-Day Operative Closure of Patent Ductus Arteriosus** .... 1281  
Frank Cetta, Serafin Y. Deleon, Patrick T. Roughneen, Lynn C. Graham, Robert C. Lichtenberg, Timothy J. Bell, Dolores A. Vitullo, and Elizabeth A. Fisher

- Coil Occlusion Versus Conventional Surgical Closure of Patent Ductus Arteriosus** ..... 1283  
Tajinder P. Singh, W. Robert Morrow, Henry L. Walters, Nickolas A. Vitale, and Mehdi Hakimi

- Aortic Valve Prolapse and Aortic Regurgitation Associated With Subpulmonic Ventricular Septal Defect** ..... 1285  
Kan Tohyama, Gengi Satomi, and Kazuo Momma

- Validity of Electrocardiographic Estimates of Left Ventricular Hypertrophy and Mass in African Americans (The Charleston Heart Study)** ..... 1289  
Donna K. Arnett, Pentti Rautaharju, Susan Sutherland, Bruce Usher, and Julian Keil

- Value of Cardiac Ultrafast Computed Tomography for Detecting Right Atrial Thrombi in Chronic Atrial Fibrillation** ..... 1292  
Hiroki Kitayama, Kaname Kiuchi, Takao Endo, and Hirokazu Hayakawa

- Prevalence of Normal Resting Left Ventricular Function With Normal Rest Electrocardiograms** ..... 1295  
Timothy F. Christian, Todd D. Miller, Panithaya Chareonthaitawee, David O. Hodge, Michael K. O'Connor, and Raymond J. Gibbons

- Comparison of Pravastatin With Crystalline Nicotinic Acid Monotherapy in Treatment of Combined Hyperlipidemia** ..... 1298  
Jose M. Mostaza, Isio Schulz, Gloria Lena Vega, and Scott M. Grundy

- Neurohormonal Response to Head-Up Tilt and Its Role in Vasovagal Syncope** ..... 1302

David L. Jardine, Ian C. Melton, Ian G. Crozier, Sinclair I. Bennett, Richard A. Donald, and Hamid Ikram

- What Is a Stent and Where Can You Get One?** ..... 1306  
John C. O'Brien, Jr., and Robert S. Sparkman

## CASE REPORT

- Anomalous Origin of the Left Main Coronary Artery from the Pulmonary Trunk Masquerading as Peripartum Cardiomyopathy** ..... 1307  
Curt Daniels, James Bacon, Mary E. Fontana, Gregory Eaton, Daniel Cohen, and Carl V. Leier

## MAY 15, 1997, VOL. 79, NO. 10

## CORONARY ARTERY DISEASE

- Relation of Contractile Reserve During Low-Dose Dobutamine Echocardiography and Angiographic Extent and Severity of Coronary Artery Disease in the Presence of Left Ventricular Dysfunction** ..... 1309  
Michael L. Main, Paul A. Grayburn, Charles Landau, and Imran Afridi

- Results of Coronary Stenting for Unstable Versus Stable Angina Pectoris** ..... 1314  
Antonio Marzocchi, Giancarlo Piovaccari, Cinzia Marrozzini, Paolo Ortolan, Tullio Palmerini, Angelo Branzi, and Bruno Magnani

- Usefulness of Hemodynamic Changes During Adenosine Infusion in Predicting the Diagnostic Accuracy of Adenosine Technetium-99m Sestamibi Single-Photon Emission Computed Tomography (SPECT)** ..... 1319  
Aman M. Amanullah, Daniel S. Berman, Hosen Kiat, and John D. Friedman

- Usefulness of ST-Segment Depression in Non-Infarct-Related Electrocardiographic Leads in Predicting Prognosis After Thrombolytic Therapy for Acute Myocardial Infarction** ..... 1323  
Giovanni Bellotti, Carlos E. Rochitte, Cícero P. de Albuquerque, João A.C. Lima, Neusa Lopes, Roberto Kalil-Filho, and Fulvio Pileggi

- Comparison of Myocardial Contrast Echocardiography and Coronary Angiography for Assessing the Acute Protective Effects of Collateral Recruitment During Occlusion of the Left Anterior Descending Coronary Artery at the Time of Elective Angioplasty** ..... 1329  
Yasuhiko Sakata, Kazuhisa Kodama, Takayoshi Adachi, Youngjae Lim, Fuminobu Ishikura, Hisakazu Fuji, Tohru Masuyama, and Atsushi Hirayama

- Comparison of Balloon Angioplasty Versus Debulking Devices Versus Stenting in Right Coronary Ostial Lesions** ..... 1334  
Suresh P. Jain, Ming W. Liu, Larry S. Dean, Ramesh Babu, Christopher M. Goods, Jay S. Yadav, Khaled F. Al-Shaibi, Atul Mathur, Sriam S. Iyer, J. Michael Parks, William A. Baxley, and Gary S. Roubin



## **Effect of Coronary Angioplasty on Precordial QT**

- Dispersion** ..... 1339  
Asim Yunus, Anne M. Gillis, Mouhieddin Traboulsi, Henry J. Duff, D. George Wyse, Merrill L. Knudtson, and L. Brent Mitchell

## **Angioscopy Variables Predictive of Early Angiographic Outcome After Excimer Laser-Assisted Coronary Angioplasty**

- ..... 1343  
Fabrice S. Larrazet, Patrick J. Dupouy, Jean-Luc Dubois Rande, Beatrice Ducot, Jan Kvasnicka, and Herbert J. Geschwind

## **Usefulness of Hypertriglyceridemia in Predicting Myocardial Infarction Late After Coronary Artery Bypass Operation**

- ..... 1350  
Adriaan A. Voors, Ben L. van Brussel, Johannes C. Kelder, and H.W. Thijs Plokker

## **ARRHYTHMIAS AND CONDUCTION DISTURBANCES**

### **Transesophageal Echocardiographic Predictors for Maintenance of Sinus Rhythm After Electrical Cardioversion of Atrial Fibrillation**

- ..... 1355  
Patrick M.J. Verhorst, Otto Kamp, Roelof C. Welling, Machiel J. Van Eenige, and Cees A. Visser

### **Feasibility and Sensing Thresholds of Temporary Single-Lead VDD Pacing in Intensive Care**

- ..... 1360  
Thomas Voigtlander, Bernd Nowak, Petra Bärenfänger, Ewald Himmrich, Norbert Treese, Hans J. Becker, and Jürgen Meyer

## **CONGESTIVE HEART FAILURE**

### **Relation of Daily Activity Levels in Patients With Chronic Heart Failure to Long-Term Prognosis**

- ..... 1364  
John T. Walsh, Andrew Charlesworth, Richard Andrews, Maxine Hawkins, and Alan J. Cowley

## **VALVULAR HEART DISEASE**

### **Predictors of Long-Term Event-Free Survival After Percutaneous Balloon Mitral Valvuloplasty**

- ..... 1370  
Gregory S. Pavlides, George T. Nahhas, James London, Connie Gangadharan, Ellen Troszak, Daniel Barth-Jones, Sylvia Puchrowicz-Ochocki, and William W. O'Neill

## **CARDIOMYOPATHY**

### **Familial Incidence of Late Ventricular Potentials and Electrocardiographic Abnormalities in Arrhythmogenic Right Ventricular Dysplasia**

- ..... 1375  
Jean-Sylvain Hermida, Alexandre Minassian, Geneviève Jarry, Jean Delonca, Jean-Luc Rey, Jean-Claude Quiret, and Jean-Philippe Lesbre

## **CARDIOVASCULAR PHARMACOLOGY**

### **Dobutamine Pharmacokinetics During Dobutamine Stress Echocardiography**

- ..... 1381  
Annemarie L. Daly, Oscar A. Linares, Marla J. Smith, Mark R. Starling, and Mark A. Supiano

## **EDITORIAL**

- The Clinical Therapeutic Implications of the Scandinavian Simvastatin Survival Study** ..... 1387  
Carlos A. Dujovne

## **BRIEF REPORTS**

### **Changes in Immediate Outcome of Percutaneous Transluminal Coronary Angioplasty in Multivessel Coronary Artery Disease in 1990 to 1991 Versus 1994 to 1995**

- ..... 1389  
Nicolas Danchin, Michaël Angioi, Romain Cador, Michel Cuillère, Yves Juillière, Gérard Ethevenot, Nicolas Bischoff, and François Cherrier

### **Usefulness of Directional Coronary Atherectomy in Patients With Acute Anterior Myocardial Infarction**

- ..... 1392  
Satoshi Kurisu, Hikaru Sato, Hironobu Tateishi, Takuji Kawagoe, Masaharu Ishihara, Yuji Shimatani, Kazuko Sakai, and Kentaro Ueda

### **Angioscopic Characteristics of Coronary Narrowing in Patients With Recurrent Myocardial Ischemia After Myocardial Infarction**

- ..... 1394  
Fernando Alfonso, Javier Segovia, Javier Goicolea, Rosana Hernandez, Antonio Fernandez-Ortiz, Camino Bañuelos, and Carlos Macaya

### **Effects of Components of Meals (Carbohydrate, Fat, Protein) in Causing Postprandial Exertional Angina Pectoris**

- ..... 1397  
Ragavendra R. Baliga, Leah Burden, Mandeep K. Sidhu, Michael W. Rampling, and Jaspal S. Kooner

### **Effects of Zatebradine (ULF5 49 CL), a Sinus Node Inhibitor, on Heart Rate and Exercise Duration in Chronic Stable Angina Pectoris**

- ..... 1401  
Stephen P. Glasser, David D. Michie, Udho Thadani, and Wolfgang M. Baiker, for the Zatebradine Investigators

### **Liver Transplantation After Coronary Artery Bypass Grafting**

- ..... 1405  
Frank Pelosi, Jr., Goran B.G. Klintmalm, Walter B. Simon, and William C. Roberts

### **Effect of Preexisting Epicardial Patch Electrodes on Defibrillation Thresholds of Unipolar Defibrillators**

- ..... 1408  
Nadim Nasir Jr., Félix R. Cedillo-Salazar, Timothy K. Doyle, Philip D. Henry, and Antonio Pacifico

### **Incidence and Implications of Abrasion of Implantable Cardioverter-Defibrillator Leads**

- ..... 1409  
David B. De Lurgio, Charn Sathavorn, Fernando Mera, Angel Leon, Paul F. Walter, and Jonathan J. Langberg

### **QT Dispersion Is a Marker for Life-Threatening Ventricular Arrhythmias After Atrioventricular Nodal Ablation Using Radiofrequency Energy**

- ..... 1412  
Jamie Beth Conti, Roger M. Mills, Jr., David A. Woodard, and Anne B. Curtis

**Reproducibility of the ST-Segment Depression/  
Heart Rate Analysis of the Exercise Electrocardiographic  
Test in Asymptomatic Middle-Aged Population** ..... 1414  
Rami Lehtinen, Harri Sievonen, Jari Viik, Ilkka Vuori, and  
Jaakko Malmivuori

**P-Wave Morphology During Right Atrial Pacing Before and  
After Atrial Flutter Ablation—A New Marker for  
Success** ..... 1417  
Mohamed H. Hamdan, Jonathan M. Kalman, Hal V. Barron,  
and Michael D. Lesh

**Clinical Usefulness of Slow Pathway Ablation  
in Patients With Both Paroxysmal Atrioventricular Nodal  
Reentrant Tachycardia and Atrial Fibrillation** ..... 1421  
Pietro Delise, Lorella Gianfranchi, Nelly Paparella, Michele  
Brignole, Carlo Menozzi, Sakis Themistoclakis, Roberto  
Mantovan, Aldo Bonso, Leonardo Corò, Alessandro Vaglio,  
Monica Ragazzo, Paolo Alboni, and Antonio Raviele

**Effects of Aerobic Training on Exaggerated Blood Pressure  
Response to Exercise in African-Americans With Severe  
Systemic Hypertension Treated With Indapamide  $\pm$   
Verapamil  $\pm$  Enalapril** ..... 1424  
Peter F. Kokkinos, Puneet Narayan, Ross D. Fletcher,  
Demetrios Tsagadopoulos, and Vasilios Papademetriou

**Elevated Soluble CD14 Receptors and Altered Cytokines in  
Chronic Heart Failure** ..... 1426  
Stefan D. Anker, Karl R. Egerer, Hans-Dieter Volk, Wolfgang  
J. Kox, Philip A. Poole-Wilson, and Andrew  
J.S. Coats

**Transcatheter Occlusion of Native Persistent Ductus  
Arteriosus Using Conventional Gianturco Coils** ..... 1430  
Mazeni Alwi, Lim M. Kang, Hasri Samion, Haifa A. Latiff,  
Geetha Kandavel, and Robayaah Zambahari

**Association Between Plasma Homocysteine and  
Extracranial Carotid Arterial Disease in Older  
Persons** ..... 1432  
Wilbert S. Aronow, Chul Ahn, and Myron R. Schoenfeld

**Prevalence and Prognostic Significance of Right-Sided  
Cardiac Mobile Thrombi in Acute Massive Pulmonary  
Embolism** ..... 1433  
Franco Casazza, Amedeo Bongarzone, Fabrizio Centonze,  
and Mario Morpurgo

**Effect of Atenolol on Birth Weight** ..... 1436  
Gregory Y.H. Lip, Michèle Beevers, David Churchill, Lara M.  
Shaffer, and D. Gareth Beevers

## JUNE 1, 1997, VOL. 79, NO. 11

### CORONARY ARTERY DISEASE

**Management of Unstable Angina Pectoris and Non-Q-  
Wave Acute Myocardial Infarction in the United States and  
Canada (The TIMI III Registry)** ..... 1441

H. Vernon Anderson, Robert S. Gibson, Peter H. Stone,  
Christopher P. Cannon, Frank Aguirre, Bruce Thompson,  
Genell L. Knatterud, and Eugene Braunwald, for the TIMI III  
Registry Study Group

**Effect of Endoscopic Transthoracic Sympathicotomy on  
Heart Rate Variability in Severe Angina Pectoris** ..... 1447  
Hans Tygesen, Göran Claes, Christer Drott, Håkan  
Emanuelsson, Milan Lomsky, Leon Lurje, Göran Rådberg,  
Bertil Wennerblom, and Christer Wettervik

**Angioplasty or Surgery for Multivessel Coronary Artery  
Disease: Comparison of Eligible Registry and Randomized  
Patients in the EAST Trial and Influence of Treatment  
Selection on Outcomes** ..... 1453  
Spencer B. King III, Huiman X. Barnhart, Andrzej S. Kosinski,  
William S. Weintraub, Nicholas J. Lembo, Jackie Y. Petersen,  
John S. Douglas Jr., Ellis L. Jones, Joseph M. Craver, Robert  
A. Guyton, Douglas C. Morris, Henry A. Liberman, and the  
EAST Investigators

**Late Myocardial Ischemic Events After Saphenous Vein  
Graft Intervention—Importance of Initially  
"Nonsignificant" Vein Graft Lesions** ..... 1460  
Stephen G. Ellis, Sorin J. Brener, Sue DeLuca, E. Murat  
Tuzcu, Russell E. Raymond, Patrick L. Whillow, and Eric J.  
Topol

**Results of Directional Coronary Atherectomy in Northern  
New England** ..... 1465  
Daniel J. O'Rourke, David J. Malenka, John F. Robb, William  
A. Bradley, Mirle A. Kellett, Samuel Shubrooks, Michael  
Hearne, Peter Verlee, David Wennberg, Paul T. Vaitkus, John  
O'Meara, Thomas J. Ryan, Jr., Bruce Hettelman, Mark Miller,  
Hebe Quinton, Anjana Sengupta, and Gerald T. O'Connor,  
for the Northern New England Cardiovascular Disease Study  
Group

**Use of Cilostazol, a Novel Antiplatelet Agent, in a Post-  
Palmaz-Schatz Stenting Regimen** ..... 1471  
Masahiko Ochiai, Takaaki Isshiki, Satoshi Takeshita, Koji Eto,  
Hideki Toyozumi, Tomohide Sato, and Hideo Miyashita

### PREVENTIVE CARDIOLOGY

**Comparison of One-Year Efficacy and Safety of  
Atorvastatin Versus Lovastatin in Primary  
Hypercholesterolemia** ..... 1475  
Michael Davidson, James McKenney, Evan Stein, Helmut  
Schrott, Rebecca Bakker-Arkema, Rana Fayyad, and Donald  
Black, for the Atorvastatin Study Group I

### VALVULAR HEART DISEASE

**Relation of Ultra Low Frequency Heart Rate Variability to  
the Clinical Course of Chronic Aortic Regurgitation** .... 1482  
Lisa A. Freed, Kenneth M. Stein, Jeffrey S. Borer, Clare  
Hochreiter, Phyllis Supino, Richard B. Devereux, Mary J.  
Roman, and Paul Kligfield

**Effects of Left Ventricular Systolic Function on Left  
Ventricular Diastolic Filling Patterns in Severe Mitral  
Regurgitation** ..... 1488

Ara Sadaniantz, Greg Miller, Betsy J. Hadi, and Alfred F. Parisi

- Preoperative Left Ventricular Peak Systolic Pressure/End-Systolic Volume Ratio and Functional Status Following Valve Surgery in Patients With Mitral Regurgitation and Enlarged End-Systolic Volumes** ..... 1493  
William R. Pitts, Richard A. Lange, Joaquin E. Cigarroa, and L. David Hillis

## CONGENITAL HEART DISEASE

- Primary Repair of Isolated Ventricular Septal Defect in Infancy Guided by Echocardiography** ..... 1498  
Adriano Carotti, Bruno Marino, Maurizio Bevilacqua, Carlo Marcelletti, Eugenio Rossi, Gaetano Santoro, Giuseppe De Simone, and Luciano Pasquini

## METHODS

- Shortening of Doppler-Derived Deceleration Time of Early Diastolic Transmittal Flow in the Presence of Pulmonary Hypertension Through Ventricular Interaction** ..... 1502  
Noritoshi Nagaya, Toru Satoh, Masaaki Uematsu, Yoshiaki Okano, Shingo Kyotani, Norifumi Nakanishi, and Takeyoshi Kunieda

- Doppler Indexes of Left Ventricular Filling After Exercise in 50-Year-Old Healthy Persons** ..... 1507  
Toomas Kangro, Egil Henriksen, Tommy Jonason, and Ivar Ringqvist

## BRIEF REPORTS

- Meta-Analysis of the Morning Excess of Acute Myocardial Infarction and Sudden Cardiac Death** ..... 1512  
Mylan C. Cohen, Kati M. Rohla, Cynthia E. Lavery, James E. Muller, and Murray A. Mittleman

- Comparison of the Prognostic Value of Dipyridamole and Dobutamine Stress Echocardiography in Patients With Known or Suspected Coronary Artery Disease** ..... 1516  
Klaus Schröder, Arne Wieckhorst, and Heinz Völler

- Comparison of Tc-99m Sestamibi Perfusion Imaging and Echocardiography Using an Arbutamine Infusion for the Detection of Coronary Artery Disease** ..... 1518  
Robert C. Hendel, William Kostuk, Rob S.B. Beanlands, Farooq Chaudry, Kathryn J. Ascah, Helen Young, and Terrence D. Ruddy

- Does the Presence and Site of Myocardial Ischemia on Perfusion Scintigraphy Predict the Occurrence and Site of Future Myocardial Infarction in Patients With Stable Coronary Artery Disease?** ..... 1521  
Tasneem Z. Naqvi, Rory Hachamovitch, Daniel Berman, Neil Buchbinder, Hosen Kiat, and Prediman K. Shah

- Comparison of Six-Month Results of Coronary Stenting Versus Balloon Angioplasty Alone in Patients With Acute Myocardial Infarction** ..... 1524

Myeong-Ki Hong, Seong-Wook Park, Jae-Joong Kim, Cheol Whan Lee, and Seungjung Park

- Are the Results of Primary Percutaneous Transluminal Coronary Angioplasty for Acute Myocardial Infarction Different During the "Off" Hours?** ..... 1527  
Philippe Garot, Jean-Michel Juliard, Hakim Benamer, and Philippe Gabriel Steg

- Transient Leftward QRS Axis Shift During Treadmill Exercise Testing or Percutaneous Transluminal Coronary Angioplasty Is a Highly Specific Marker of Proximal Left Anterior Descending Coronary Artery Disease** ..... 1530  
Koji Kodama, Mareomi Hamada, and Kunio Hiwada

- Effect on Survival of Previous Angina Pectoris After Acute Myocardial Infarction** ..... 1534  
Yoshio Kobayashi, Shunichi Miyazaki, Yuji Miyao, Isao Morii, Takahiro Matsumoto, Satoshi Daikoku, Akira Itoh, Yoichi Goto, and Hiroshi Nonogi

- Reversible Reduction in Plasma Concentration of Nitric Oxide Induced by Cigarette Smoking in Young Adults** ..... 1538  
Koichi Node, Masafumi Kitakaze, Hiromichi Yoshikawa, Hiroaki Kosaka, and Masatsugu Hori

- Clinical Significance of an Equivocal Signal-Averaged Electrocardiogram** ..... 1541  
Steven D. Nelson, Mark Meier, Ali A. Mehdirad, Charles J. Love, and Stephen F. Schaal

- Association of Plasma Renin Activity and Echocardiographic Left Ventricular Hypertrophy With Frequency of New Coronary Events and New Atherothrombotic Brain Infarction in Older Persons With Systemic Hypertension** ..... 1543  
Wilbert S. Aronow, Chul Ahn, Itzhak Kronzon, and Hal Gutstein

- Effects of Dobutamine on Aortic Valve Indexes in Asymptomatic Patients With Bileaflet Mechanical Prostheses in the Aortic Valve Position** ..... 1546  
Chang-Her Tsai, Tsung-Ming Lee, Chih-Hao Wang, Kwan-Lih Hsu, Chiau-Sueng Liao, Yuan-Teh Lee, and Shu-Hsun Chu

- Detection of Strands in Native Aortic Valves by Transesophageal Echocardiography** ..... 1549  
Thomas Menzel, Susanne Mohr-Kahaly, Katrin J. Arnold, Bernhard Kölsch, Helmut Kopp, Martin Spiecker, Stephan R. Wagner, Rolf Meinert, and Jürgen Meyer

- Digital Acoustic Analysis of Precordial Innocent Versus Ventricular Septal Defect Murmurs in Children** ..... 1552  
Douglas A. Balster, David P. Chan, Daniel G. Rowland, and Hugh D. Allen

- Plasma Levels of Adrenomedullin in Primary and Secondary Pulmonary Hypertension in Patients <20 Years of Age** ..... 1556

Muneo Yoshibayashi, Tetsuro Kamiya, Kazuo Kitamura, Yoshihiko Saito, Kenji Kangawa, Toshio Nishikimi, Hiroaki Matsuoka, Tanenao Eto, and Hisayuki Matsuo

**Intake of Antioxidants Among American Cardiologists** ..... 1558  
Jason Mehta

**A Method Providing Bidirectional Control of Coil Delivery in Occlusions of Patent Ductus Arteriosus With Shallow Ampulla and Pott's Shunts** ..... 1561  
Frank F. Ing, Michael R. Recto, Arwa Saidi, Susan Denfield, and Charles E. Mullins

**Comparison of Intravascular Ultrasound Measurements at the Sites of Balloon Dilatations of Femoral Arteries With Measurements of Postmortem Gross Arterial Segments at the Same Sites** ..... 1564  
Huai Luo, Michael C. Fishbein, Hans Berglund, Toshihiko Nishioka, Chongjin Kim, and Robert J. Siegel

### CASE REPORTS

**Documentation by Intravascular Ultrasound of Thrombus Overlying a Small Atheromatous Plaque in a Coronary Artery in Unstable Angina Pectoris and in Acute Myocardial Infarction** ..... 1568  
Yochai Birnbaum, Huai Luo, Michael C. Fishbein, Bruce Samuels, and Robert J. Siegel

**Use of Glucagon for Acute Intravenous Diltiazem Toxicity** ..... 1570  
Nicholas C. Mahr, Alfonso Valdes, and Gervasio Lamas

**JUNE 15, 1997, VOL. 79, NO. 11**

### CORONARY ARTERY DISEASE

**Results of Coronary Artery Bypass Grafting by a Single Surgeon in Patients With Left Ventricular Ejection Fractions  $\leq 30\%$**  ..... 1573  
John A. Eleftheriades, David L.S. Morales, Christophe Gradel, George Tollis Jr., Evelyn Levi, and Barry L. Zaret

**Value of Posterior and Right Ventricular Leads in Comparison to the Standard 12-Lead Electrocardiogram in Evaluation of ST-Segment Elevation in Suspected Acute Myocardial Infarction** ..... 1579  
Robert J. Zalenski, Robert J. Rydman, Edward P. Sloan, Kenneth H. Hahn, David Cooke, Joanne Fagan, Denise J. Fligner, William Hessians, David Justis, Linda M. Kampe, Shirish Shah, John Tucker, and Diane Zwicke

**Timing and Mechanism of Death Determined Clinically After Primary Angioplasty for Acute Myocardial Infarction** ..... 1586  
Bruce R. Brodie, Thomas D. Stuckey, Charles J. Hansen, Denise B. Muncy, Richard A. Weintraub, Thomas A. Kelly, and Jonathan J. Berry

**One-Week and Six-Month Angiographic Controls of Stent Implantation After Occlusive and Nonocclusive Dissection**

**During Primary Balloon Angioplasty for Acute Myocardial Infarction** ..... 1592  
Christian Spaulding, Romain Cador, Khaldoun Benhamda, Ould Sidi Ali, Elias Garcia-Cantu, Jacques Monsegu, Antoine Py, and Simon Weber

**Intravascular Ultrasonic Evidence for Importance of Plaque Distribution (Eccentric vs Circumferential) in Determining Distensibility of the Left Anterior Descending Artery** .. 1596  
Masakazu Yamagishi, Tetsuhiro Umeno, Yoichiro Hongo, Hiroshi Tsutsui, Yoichi Goto, Satoshi Nakatani, and Kunio Miyatake

**Comparison of Men Versus Women in Cross-Sectional Area Luminal Narrowing, Quantity of Plaque, Presence of Calcium in Plaque, and Lumen Location in Coronary Arteries by Intravascular Ultrasound in Patients With Stable Angina Pectoris** ..... 1601  
Ran Kornowski, Alexandra J. Lansky, Gary S. Mintz, Kenneth M. Kent, Augusto D. Pichard, Lowell F. Satler, Theresa A. Bucher, Jeffrey J. Popma, and Martin B. Leon

**Determinants of Transplant-Related Coronary Calcium Detected by Ultrafast Computed Tomography Scanning** ..... 1606  
Mahmud Barbir, Fawzi Lazem, Tim Bowker, Peter Ludman, Nicholas Banner, Andrew Mitchell, and Magdi Yacoub

**Prognostic Value of Dobutamine Stress Echocardiography in Patients Undergoing Diagnostic Coronary Arteriography** ..... 1610  
Roxy Senior, Prem Soman, Rajdeep S. Khattar, and Avijit Lahiri

**Impact of Impaired Coronary Flow Reserve and Insulin Resistance on Myocardial Energy Metabolism in Patients With Syndrome X** ..... 1615  
Hans Erik Bøtker, Helle Sauer Sonne, Jens Peder Bagger, and Torsten Toftgaard Nielsen

### ARRHYTHMIAS AND CONDUCTION DISTURBANCES

**Clinical Predictors of Transvenous Biphasic Defibrillation Thresholds** ..... 1623  
Michael R. Gold, Koroush Khalighi, Neal G. Kavesch, Barry Daly, Robert W. Peters, and Stephen R. Shorofsky

**Influence of Beta-Adrenergic and Vagal Activity on the Effect of Exogenous Adenosine on Supraventricular Tachycardia Termination** ..... 1628  
Ching-Tai Tai, Shih-Ann Chen, Chern-En Chiang, Shih-Huang Lee, Zu-Chi Wen, Mau-Song Chang, and Sheng-Nan Wu

**Low-Energy Endocardial Defibrillation Using Dual, Triple, and Quadruple Electrode Systems** ..... 1632  
Anand N. Munsif, Sanjeev Saksena, Paul DeGroot, Ryszard B. Krol, Philip Mathew, Irakli Giorgberidze, Raj R. Kaushik, and Rahul Mehra



## CONGESTIVE HEART FAILURE

- Correlates of Early Hospital Readmission or Death in Patients With Congestive Heart Failure** ..... 1640  
Marshall H. Chin and Lee Goldman

- Depressed Heart Rate Variability as an Independent Predictor of Death in Chronic Congestive Heart Failure Secondary to Ischemic or Idiopathic Dilated Cardiomyopathy** ..... 1645  
Piotr Ponikowski, Stefan D. Anker, Tuan Peng Chua, Roman Szelemez, Massimo Piepoli, Stamatis Adamopoulos, Katharine Webb-Peploe, Derek Harrington, Waldemar Banasiak, Krzysztof Wrbec, and Andrew J.S. Coats

## CARDIOMYOPATHY

- Comparison of Morphologic Assessment of Hypertrophic Cardiomyopathy by Magnetic Resonance Versus Echocardiographic Imaging** ..... 1651  
Guillem Pons-Lladó, Francesc Carreras, Xavier Borrás, Jaume Palmer, Jaume Llauger, and Antonio Bayés de Luna

## METHODS

- Enhancement of Left Ventricular Cavity Opacification by Harmonic Imaging After Venous Injection of Albunex** ..... 1657  
Jonathan R. Lindner, John M. Dent, Sally P. Moos, Ananda R. Jayaweera, and Sanjiv Kaul

## EDITORIAL

- Results of Recent Large Cholesterol-Lowering Trials and Implications for Clinical Management** ..... 1663  
Antonio M. Gotto, Jr.

## BRIEF REPORTS

- Relation of Duration of ST Elevation at Reperfusion and Improvement of Left Ventricular Function After Successful Primary Angioplasty of the Left Anterior Descending Coronary Artery in Anterior Wall Acute Myocardial Infarction** ..... 1667  
Masahiko Ochiai, Takaaki Isshiki, Satoshi Takeshita, Akio Oshima, Hideki Toyozumi, Kiyoyuki Kondo, Tomohide Sato, and Hideo Miyashita

- Fish Consumption, n-3 Fatty Acids in Cell Membranes, and Heart Rate Variability in Survivors of Myocardial Infarction With Left Ventricular Dysfunction** ..... 1670  
Jeppe Hagstrup Christensen, Eva Korup, Jens Aarøe, Egon Toft, Jørn Møller, Klaus Rasmussen, Jørn Dyerberg, and Erik Berg Schmidt

- Intravascular Ultrasound Analysis of Reduction in Progression of Coronary Narrowing by Treatment With Pravastatin** ..... 1673  
Tsutomu Takagi, Kiyoshi Yoshida, Takashi Akasaka, Takeshi Hozumi, Shigefumi Morioka, and Junichi Yoshikawa

- Inhibition of Nitric Oxide Synthesis During the Cold Pressor Test in Patients With Coronary Artery Disease** ..... 1676

Dimitris Tousoulis, Graham Davies, Costas Tentolouris, Tom Crake, and Pavlos Toutouzas

- Hospital Cost of Complications Associated With Coronary Artery Bypass Graft Surgery** ..... 1680  
Ruth E. Hall, Arlene S. Ash, William A. Ghali, and Mark A. Moskowitz

- Relation of Unstable Angina and Myocardial Infarction to Progression of Coronary Narrowing in Patients Undergoing Coronary Artery Bypass Grafting (Utilizing an Internal Mammary Artery)** ..... 1683  
Stamatios Lerakis, David Cutler, Dong Zhao, Vincent R. Conti, and Barry F. Uretsky

- Effects of Nicorandil, an Antianginal Potassium Channel Opener, on Left Ventricular Systolic and Diastolic Function in Patients With Chronic Coronary Artery Disease** ..... 1685  
Susumu Murayama, Tetsu Yamakado, and Takeshi Nakano

- Influence of Cardiovascular Risk Status on Coronary Flow Reserve in Healthy Young Men** ..... 1690  
Olli-Pekka Pitkänen, Olli T. Raitakari, Tapani Rönkämaa, Harri Niinikoski, Pirjo Nuutila, Hidehiro Iida, Jorma S.A. Viikari, and Juhani Knuuti

- Hormonal Responses During Tilt-Table Test in Neurally Mediated Syncope** ..... 1692  
George N. Theodorakis, Manolis Markianos, Efthimios G. Livanis, Elias Zarvalis, Panagiota Flevari, and Dimitrios Th. Kremastinos

- Comparison of Early Target Organ Damage Between Blacks and Whites With Mild Systemic Arterial Hypertension** ..... 1695  
Roland E. Schmieder, Jürgen K. Rockstroh, Gerd Lüchters, Uschi Hammerstein, and Franz H. Messerli

- Serum Levels of Soluble Form of Fas Molecule in Patients With Congestive Heart Failure** ..... 1698  
Masaki Okuyama, Seiji Yamaguchi, Naoki Nozaki, Minako Yamaoka, Masanori Shirakabe, and Hitonobu Tomoike

- Delayed Recovery of Postexercise Blood Pressure in Patients With Chronic Heart Failure** ..... 1701  
Hiroaki Kitaoka, Jun Takata, Takashi Furuno, Fumiyasu Yamasaki, Taishiro Chikamori, and Yoshinori Doi

- Transient ST-Segment Changes Associated With Mitral Valvuloplasty Using the Inoue Balloon** ..... 1704  
Peter F. Ludman, David Hildick-Smith, Alun Harcombe, and Leonard M. Shapiro

- Pericardial Effusion in Adults Undergoing Surgical Repair of Atrial Septal Defect** ..... 1706  
Alex S.B. Yip, Elaine M.C. Chau, Wing-Hing Chow, On-Hing Kwok, and King-Loong Cheung

- Characteristics of 161 Patients With Cardiac Tumors Diagnosed During 1993 and 1994 in Japan** ..... 1708

Akihiro Endo, Akira Ohtahara, Toru Kinugawa,  
Masatake Mori, Yukihiro Fujimoto, Akio Yoshida,  
Hiroaki Kuroda, Tohru Mori, Hiroto Mashiba, and  
Chiaki Shigemasa

#### **CASE REPORT**

**Possible Association of Thrombotic, Nonbacterial  
Vegetations of the Mitral Ring—Mitral Annular Calcium  
and Stroke** ..... 1712  
Jean-Christophe Eicher, François-Xavier Soto, Laurence  
DeNadai, Olivier Ressencourt, Sylvie Falcon-Eicher, Maurice  
Giroud, Pierre Louis, and Jean-Eric Wolf

#### **FROM THE EDITOR**

**Proceedings of the Editorial Board Meeting of  
The American Journal of Cardiology  
on 17 March 1997** ..... 1716

#### **SUPPLEMENT ISSUES**

---

##### **MARCH 6, 1997, VOL. 79 (5A)**

**The Endothelium: Impact on Treatment Strategies for  
Coronary Artery Disease**

---

##### **MARCH 20, 1997, VOL. 79 (6A)**

**Prevention of Sudden Cardiac Death: The Mirowski  
Symposium**

---

##### **MAY 22, 1997, VOL. 79 (9A)**

**A Symposium: Calcium Antagonists in Hypertension:  
Evolving Perspectives**

---

##### **JUNE 5, 1997, VOL. 79 (11A)**

**Cardiovascular Effects of Adenosine: From Receptors to  
Bedside**

---

##### **JUNE 26, 1997, VOL. 79 (12A)**

**Myocardial Ischemia: New Perspectives on Prevention and  
Stabilization of Coronary Syndromes**

